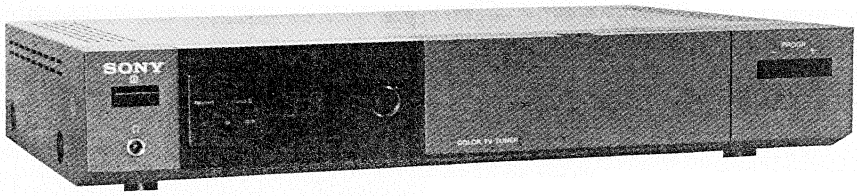
VTX-1100M
RM-669

SERVICE MANUAL

E Model

Chassis No. SCC-A96A-A



Note: The service manual for RM-669 has been issued separately.

SPECIFICATIONS

Television system	CCIR system B, G and H, French system L, System I, American system M, OIRT system D/K
Dual sound system	Two carrier system
Channel coverage	VHF UHF E2-S20 E21-E68 (CCIR) F2-F10 F21-F69 (L) IA-IJ B21-B68 (I) A02-49 A14-A78 (M) R1-R12 R21-R60 (OIRT)
Programming system	30 programmes Automatic programming digital tuning
Aerial	75-ohm standard aerial socket (DIN45325/IEC169-2)
Outputs	MONITOR OUT/S-MONITEUR and TV OUT/S-TV VIDEO (BNC connector) 1 Vp-p, 75 ohms, unbalanced, sync negative AUDIO (2 phono jacks) –5 dBs (436 mV rms), 7 kilohms CONTROL/CONTROLE (minijack) 1–3 Vp-p MULTI OUT/S-MULTI (8-pin socket) Same as the above VIDEO, AUDIO and CONTROL/CONTROLE Headphones (stereo binaural jack) Accepts low and high impedance stereo headphones
Power requirements	110 – 240 V ac, 50/60 Hz
Power consumption	16 W
Dimensions	Approx. 430 x 80 x 265 mm (w/h/d)
Weight	Approx. 4.5 kg
Accessories supplied	Remote Commander RM-669 Video Cable VK-2D (8-pin plug to 8-pin plug, 2m)

Design and specifications subject to change without notice.

MICROFILM

COLOUR TV TUNER

SONY®

ACC

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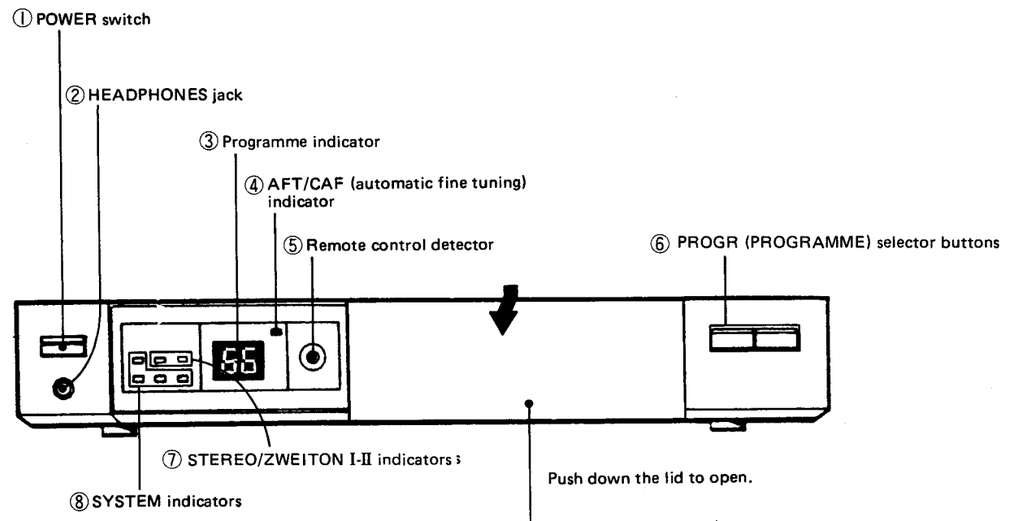
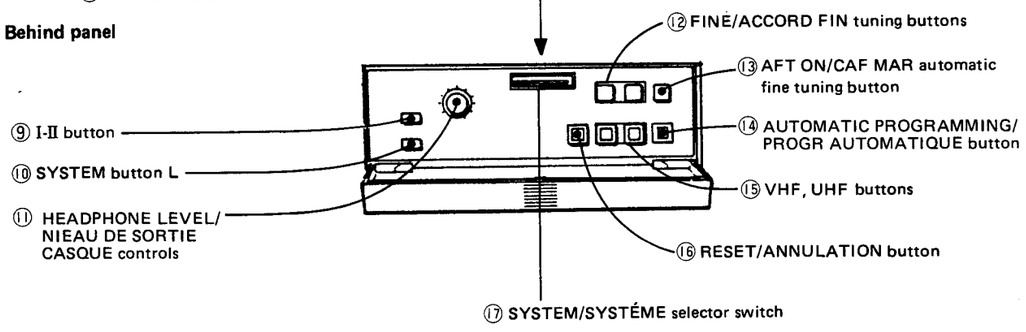
SECTION 1
OUTLINE

1-1. LOCATION AND FUNCTION OF PARTS AND CONTROLS

Front


① POWER switch
② HEADPHONES jack
③ Programme indicator
④ AFT/CAF (automatic fine tuning) indicator
⑤ Remote control detector
⑥ PROGR (PROGRAMME) selector buttons
⑦ STEREO/ZWEITON I-II indicators
⑧ SYSTEM indicators
Push down the lid to open.

Behind panel


⑫ FINE/ACCORD FIN tuning buttons
⑬ AFT ON/CAF MAR automatic fine tuning button
⑭ AUTOMATIC PROGRAMMING/ PROGR AUTOMATIQUE button
⑮ VHF, UHF buttons
⑯ RESET/ANNULATION button
⑨ I-II button
⑩ SYSTEM button L
⑪ HEADPHONE LEVEL/ NIEAU DE SORTIE CASQUE controls
⑰ SYSTEM/SYSTÉME selector switch

① ⏻ (power) **switch**
Depress to turn on the power. Press again to turn the power off. When the set is operated with the supplied Remote Commander, be sure to keep this switch depressed.

② 🎧 (headphones) **jack** (stereo binaural)
For private listening, connect a stereo headphones to this jack. Any low or high impedance headphones can be connected.

③ **Programme indicator** (red)
Indicates the programme number from 0 to 29. Note that programme 30 is indicated by "0".
A dot will blink on the left corner when any function button on the Remote Commander is pressed.

④ **AFT/CAF indicator** (red)
Lights when the AFT/CAF (automatic fine tuning) circuit is activated.

⑤ **Remote control detector**
Receives the infrared control from the Remote Commander.

⑥ **PROGR** (programme) **selector buttons**
Press the + button for higher numbered programmes, or — button for lower numbered programmes.
Every push on these buttons changes the programme in sequence.

⑦ **STEREO/ZWEITION I-II indicators**
If stereo-programme is received, the indicators lamps I and II light up. If dual-sound-programme is received indicator I or II lights up.

⑧ **System indicators**
The appertaining indicators lights up when a transmitter of one of the TV-systems in received.

⑨ **I-II button**
When receiving a dual-sound programme, select by pressing this button or I/II button on remote control, whether you wont to hear the programme in your mother language (normally on channel I) or in the original language (normally on channel II).

⑩ **System button L**
With this button you can pre-select whether in case of the automatic programme selection the channels of the receivable French TV-standard L or the channels of other receivable TV-systems should be stored first. In case of manual programme pre-selection you should also use this button in order to select whether the station of French standard L or a station of other receivable systems (B/G/H/I, M or D/K) should be stored.

⑪ **HEADPHONE LEVEL/NIEAU DE SORTIE CASQUE controls**
Turn clockwise to increase the headphones volume, or counter-clockwise to decrease it.
This control does not affect the audio output signals from the MONITOR OUT/S-MONITEUR and TV OUT/S-TV jacks.

⑫ **FINE/ACCORD FIN buttons**
Press to fine-tune a channel manually.
Press the + button for higher frequencies, or the — button for lower frequencies.
Once either of the FINE/ACCORD FIN buttons is pressed, the AFT/CAF circuit on the selected channel is deactivated and the AFT/CAF indicator goes off.

⑬ **AFT ON/CAF MAR button**
Press to restore the AFT/CAF circuit on the channel which has been fine-tuned manually.

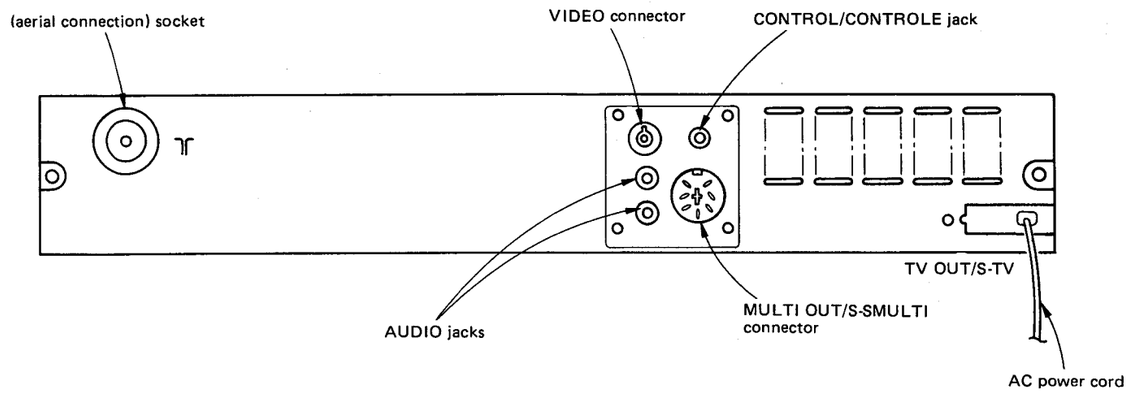
⑭ **AUTOMATIC PROGRAMMING/PROG AUTOMATIQUE buttons**
Press to programme your receivable channels automatically.

⑮ **VHF; UHF buttons**
Press to programme the channel manually in the desired sequence.

⑯ **RESET/ANNULATION buttons**
If this button is pressed, the set will be tuned to a frequency below channel 2.

⑰ **SYSTEM/SYSTÉME selector switch**
The system selector switch should usually be on AUTO position. Only when receiving D/K stations (East European TV-standard) it shoud be pushed to D/K, otherwise there is not any sound to be heard. All other TV-standards will be automatically recognized and stored.
Position M of slide switch should only be set, if there are difficulties in receiving with system M. Usually these stations are also recognized in AUTO position.

Rear



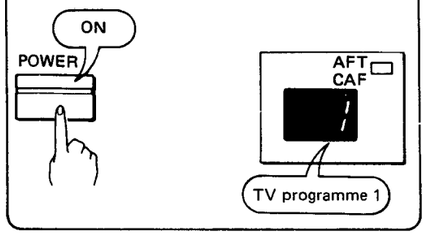
1-2. PROGRAMME PRESETTING

This TV tuner has 30 programme positions. Once you preset the channels broadcast in your area, programme selection is simply made by pressing the PROGRAMME buttons on the TV tuner or using the hand-held Remote Commander.
Perform programme presetting by following one of the two procedures; automatic programming or manual programming.

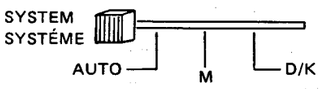
AUTOMATIC PROGRAMMING

With the automatic programming system, receivable VHF and UHF channels in your area can be preset automatically in numerical sequence; from the lowest frequency VHF channel through the highest UHF channel.

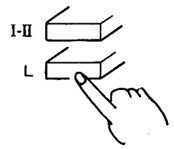
1 **Turn on the power.**



2 **Put system switch in position AUTO**

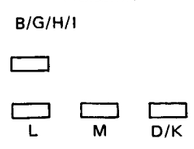


3 **System button L**

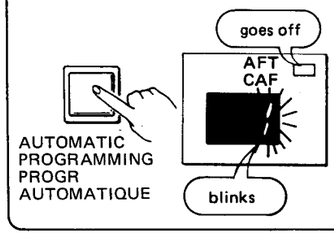


Pre-select with system button L whether the programme of the French system L or the other receivable programme of other TV-systems (B/G/H/I, D/K) should be stored first.

Indicators

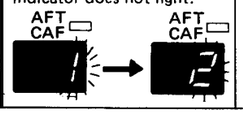


4 **Start the automatic programming.**



The first channel found will be memorized on programme position 1, the second on position 2, and so on.
This tuning-memorizing sequence will be repeated for each channel in your area.
When no more channels can be found; automatic programming will stop and the remaining programme positions will be skipped.

Guide for automatic programming procedure

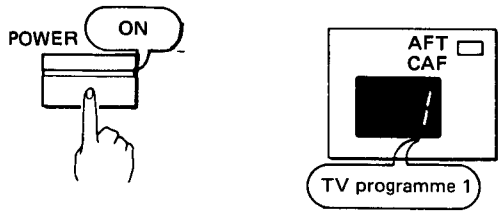
	While programming	When the programming is finished
Picture and/or sound	No picture and no sound between stations. When tuned in and memorized, the programme will appear.	The programme on position 1 will appear.
Programme Indicator and AFT/CAF indicator	The number corresponding to the programme position being preset will blink continuously. The AFT/CAF indicator does not light. 	The number "1" will appear (not blink). The AFT/CAF indicator will light.

Remark:
If system switch is not on AUTO position, indicator M or D/K lights up depending on position of slide switch.
A system pre-selection (3) with the L-button is not possible any more.
The automatic search mode stores in two runs all programmes of standards M, D/K and B/G/H/I.
After that the indicator returns to programme number 1.

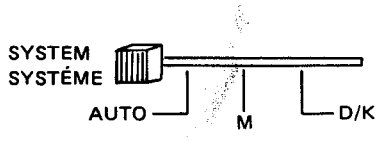
MANUAL PROGRAMMING

With the manual programme search system, the channels you want can be preset in the desired sequence.
Any programme position can be set to any frequency from below channel 2 to the highest UHF TV channel. Consult your local TV listings to find out the active channels in your area.
Make a list of your desired VHF and UHF channels and arrange them in the desired sequence.

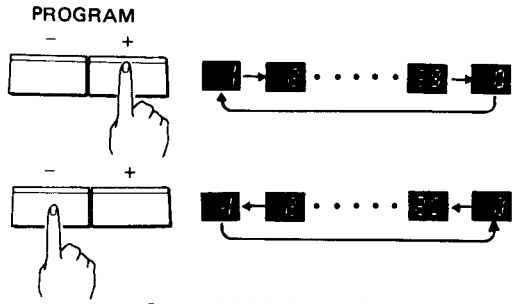
1 **Turn on the power.**



2 **Put system switch in position AUTO**

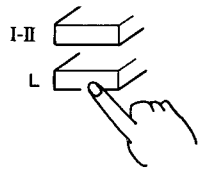


3 **Select the programme position to thich the channel is to be preset.**



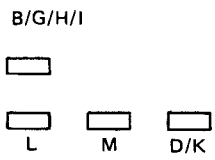
Do not hold the button in, just press it momentarily.

4 **System button L**

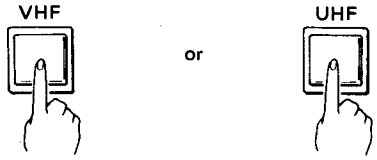


Select with whether you want to store a station of French system L or other receivable stations of systems B/G/H/I, M or D/K.

Indicators



5 **Tune in the desired station.**



Do not hold the button in, just press it momentarily.

While searching for a station
No picture appears.
The programme number blinks.
The AFT/CAF indicator goes off.

When a station is tuned in
A picture appears.
The programme number stops blinking.
The AFT/CAF indicator lights.

If searching stops between channels
This may happen in strong signal areas. Just press the VHF, UHF button again.

Repeat steps 3 till 5 until all the desired TV stations have been preselected.

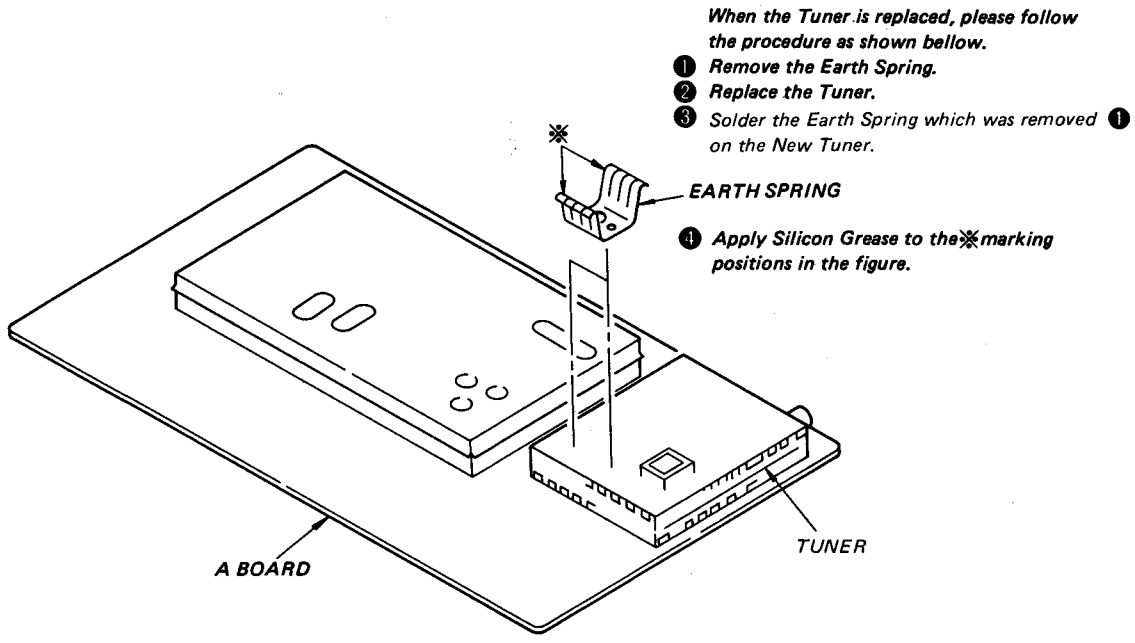
Use of the RESET/ANNULATION button
If this button is pressed, any memory on the selected programme position will be erased and the set will be automatically tuned to a frequency below channel 2.

- It is recommended that your press the RESET/ANNULATION button for unused programme positons if any.

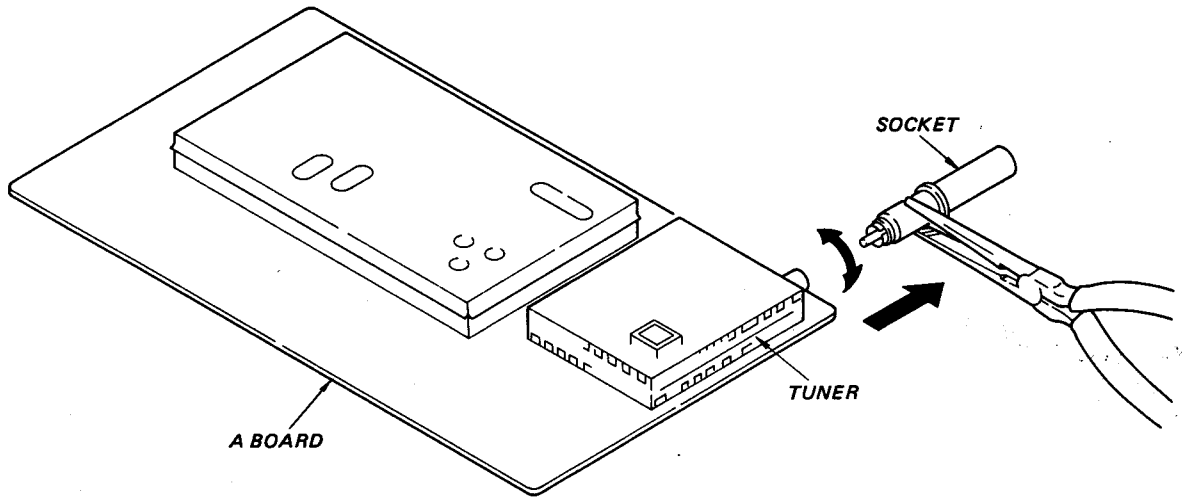
Remark:
If the system switch is not set on position AUTO a system pre-selection L is not possible any more.
Only the stations of systems, M, D/K, B/G/H/I are stored them.

SECTION 2
DISASSEMBLY

2-1. TUNER REPLACEMENT

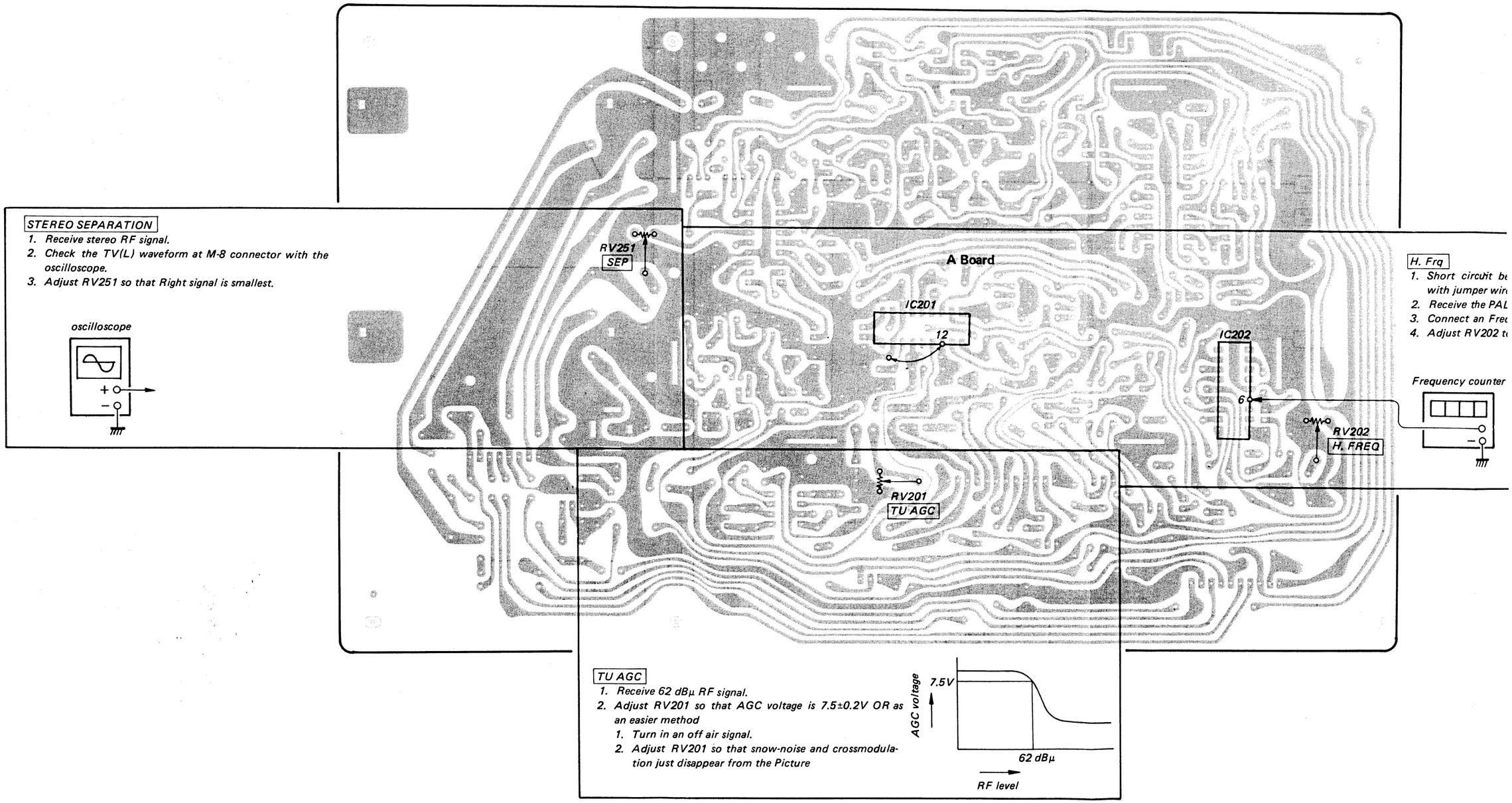

When the Tuner is replaced, please follow the procedure as shown bellow.
❶ Remove the Earth Spring.
❷ Replace the Tuner.
❸ Solder the Earth Spring which was removed ❶ on the New Tuner.
※
EARTH SPRING
❹ Apply Silicon Grease to the※marking positions in the figure.
A BOARD
TUNER

2-2. SOCKET REMOVAL



SECTION 3
CIRCUIT ADJUSTMENTS

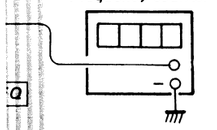
3-1. A BOARD ADJUSTMENT



H. Frq

1. *Short circuit between pin (12) of IC201 and ground with jumper wire.*
2. *Receive the PAL Colour-bar signal.*
3. *Connect an Frequency counter to the pin (6) of IC202.*
4. *Adjust RV202 to obtain 15.625±50 Hz.*

Frequency counter



3-2. TV SYSTEMS LIST

	TV SYSTEMS					
	L(BAND I)	L(BAND III/U)	B/G/H	I	M	D/K
SYS(M3④→AI④)	L	L	H	H	H	L/H
L (A2⑥→MI2⑥)	H	H	L	L	L	L
LI (A2⑨→MI2⑨)	H	L	L	L	L	L
L2 (A2⑩→MI2⑩)	L	H	H	H	H	H
Q226, IC203	OFF	OFF	ON	ON	ON	ON
IC501, Q501	ON	ON	OFF	OFF	OFF	OFF
D501 ~D504	OFF	ON	ON	ON	ON	ON
IC502	OFF	OFF	ON	ON	ON	OFF
IC205	OFF	OFF	OFF	OFF	ON	ON
Q510/D521 D505	OFF/ON	OFF/ON	ON/OFF	ON/OFF	OFF/ON	OFF/ON
IC501(AF IN)	①, ⑬pin	①, ⑬	④, ⑥	④, ⑥	①, ⑬	①, ⑬
Q506, 507	OFF	OFF	ON	ON	OFF	OFF
Q156	OFF	OFF	ON	OFF	ON	OFF
Q170	OFF	OFF	OFF	OFF	OFF	ON
M (A2⑪⇌MI2⑪)	L	L	L	L	H	L
D/K (A2⑫←MI2⑫)	L	L	L	L	L	H
B/G (AI⑩→M3⑩)	L	L	H	L	L	L
D201, D202	OFF	ON	ON	ON	ON	ON
D203	ON	ON	OFF	ON	ON	ON
D210(5.5M/6.0M)	OFF/ON	OFF/ON	ON/OFF	OFF/ON	OFF/ON	OFF/ON
Q210	OFF	OFF	ON	OFF	OFF	OFF
Q214	OFF	OFF	OFF	ON	OFF	OFF
Q225	OFF	OFF	OFF	OFF	ON	OFF
D215	ON	ON	OFF	OFF	ON	OFF
Q202/Q157	OFF	OFF	OFF	OFF	ON	OFF
Q204	OFF	OFF	OFF	OFF	ON	OFF

BAND SW (IC101)

BAND	IN PUT		OUT PUT		
	③	④	①	②	⑦
I	L	H	H	L	L
III	L	L	L	L	H
U	H	L	L	H	L

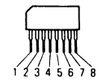
IN PUT
L : IV below
H : 3V above

OUT PUT
H ≒ I2V

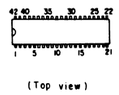
SECTION 4
DIAGRAMS

4-1. SEMICONDUCTORS

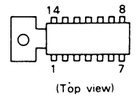
CX20106A
M54572L



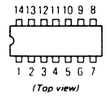
CX523-113P



LA4175

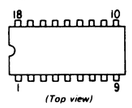


M58657P
TDA4445F
TDA4944

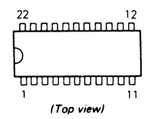


TBA129

TDA2546A
TDA2595A
TDA4429T



TDA4940



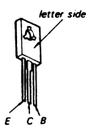
μPC574

2SA1048
2SC403SP
2SC2458
DTA144ES
DTC124ES
DTC144ES
DTC143TS

2SA1175
2SC2785

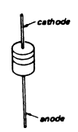
2SB733

2SB772

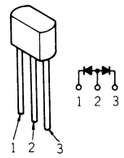


2SD788
BF199
BF959

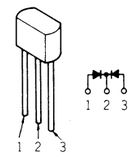
1SS119
1SS168



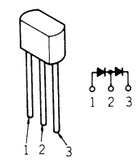
MC911



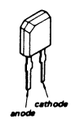
MC921



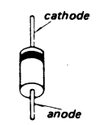
MC931



PH302B

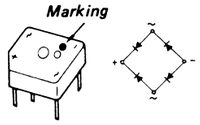


RD10E-B1
RD20E-B2
RD22E-B2
RD30E-B2
RD39JS-T1B1
RD6.8E-B3

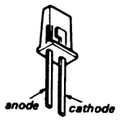


S3WB60Z

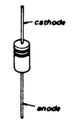
Marking



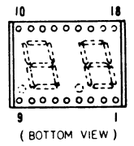
SG232D
SR632D

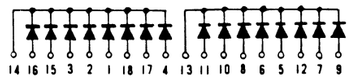


SIB01-02

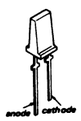


SL1274

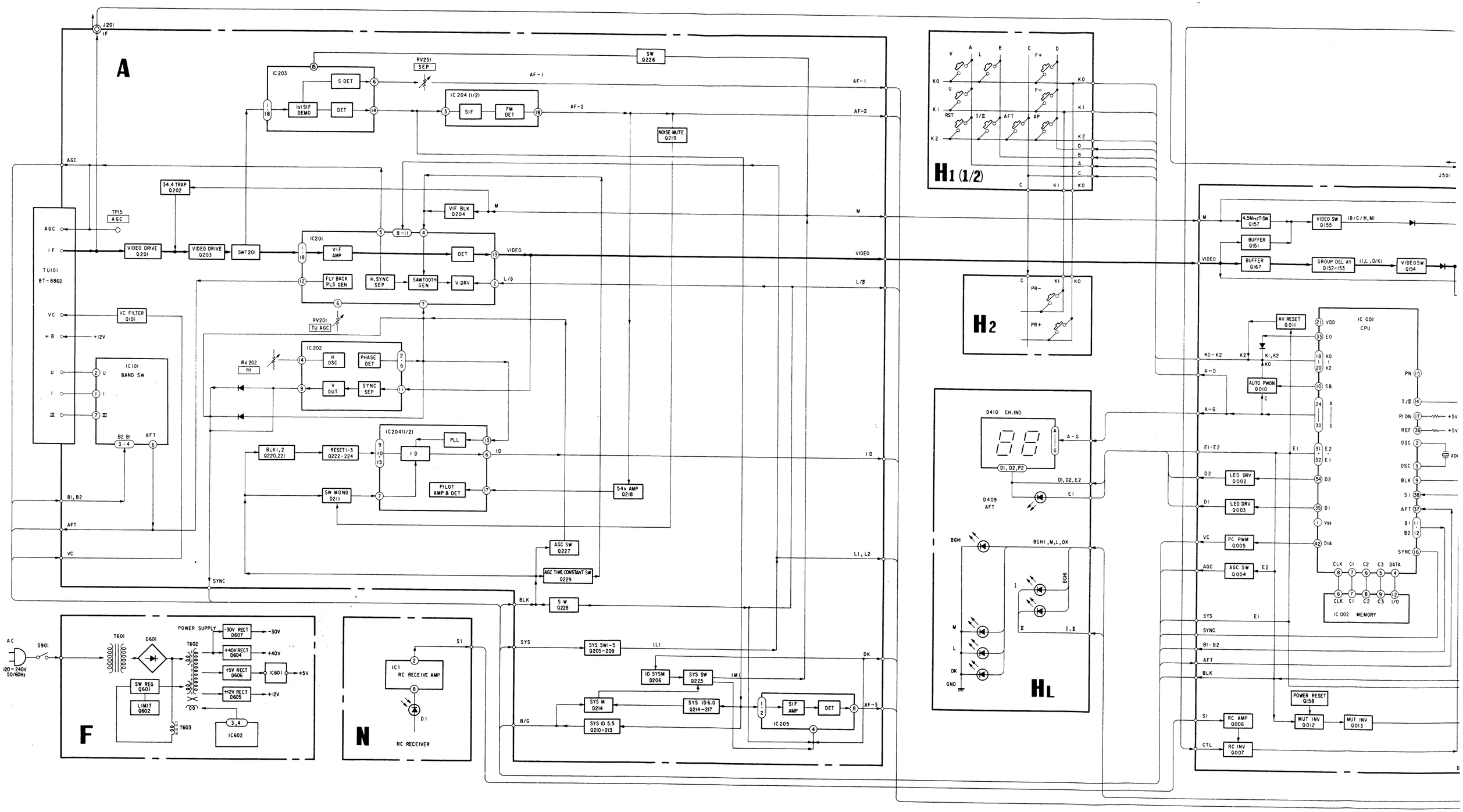




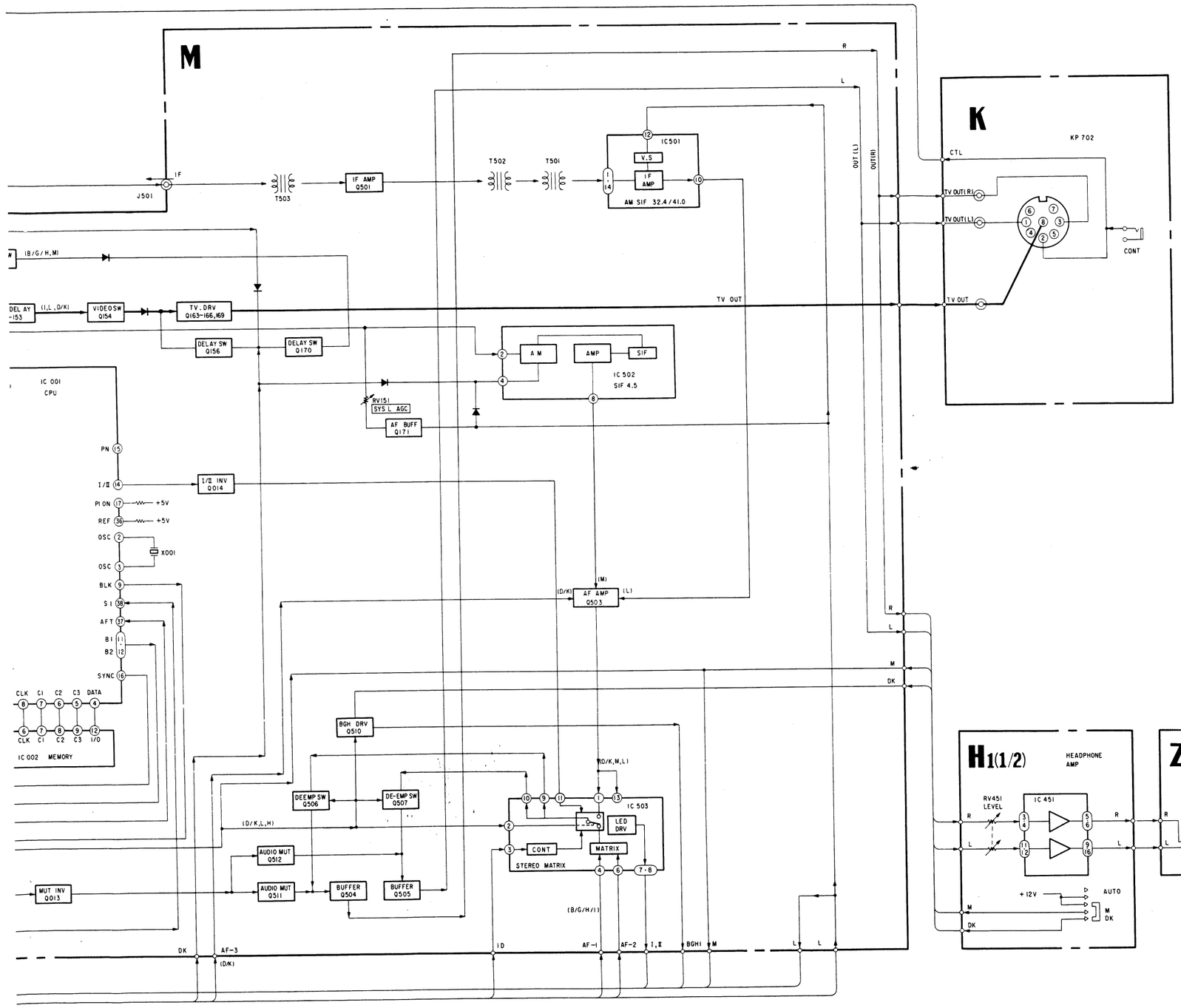
SY432D



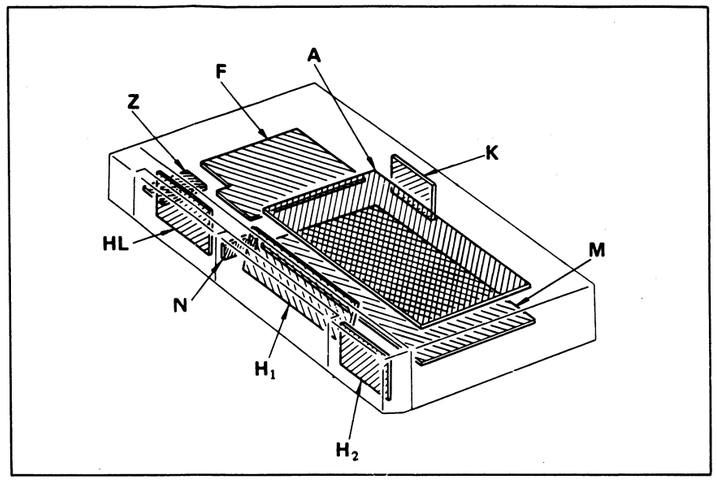
4-2. BLOCK DIAGRAM



VTX-1100M RM-669



4-3. CIRCUIT BOARDS LOCATION



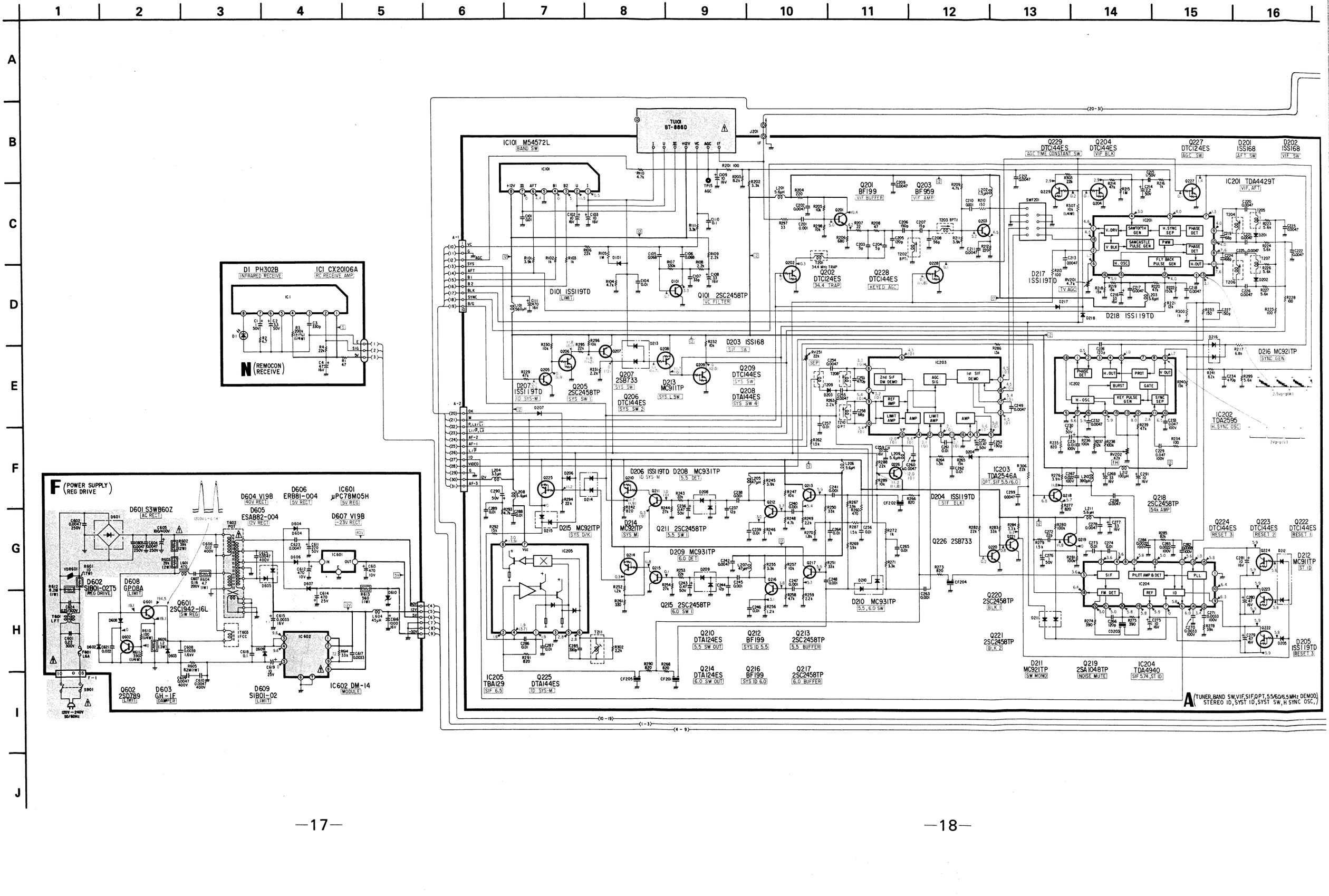
Note for schematic diagram.

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

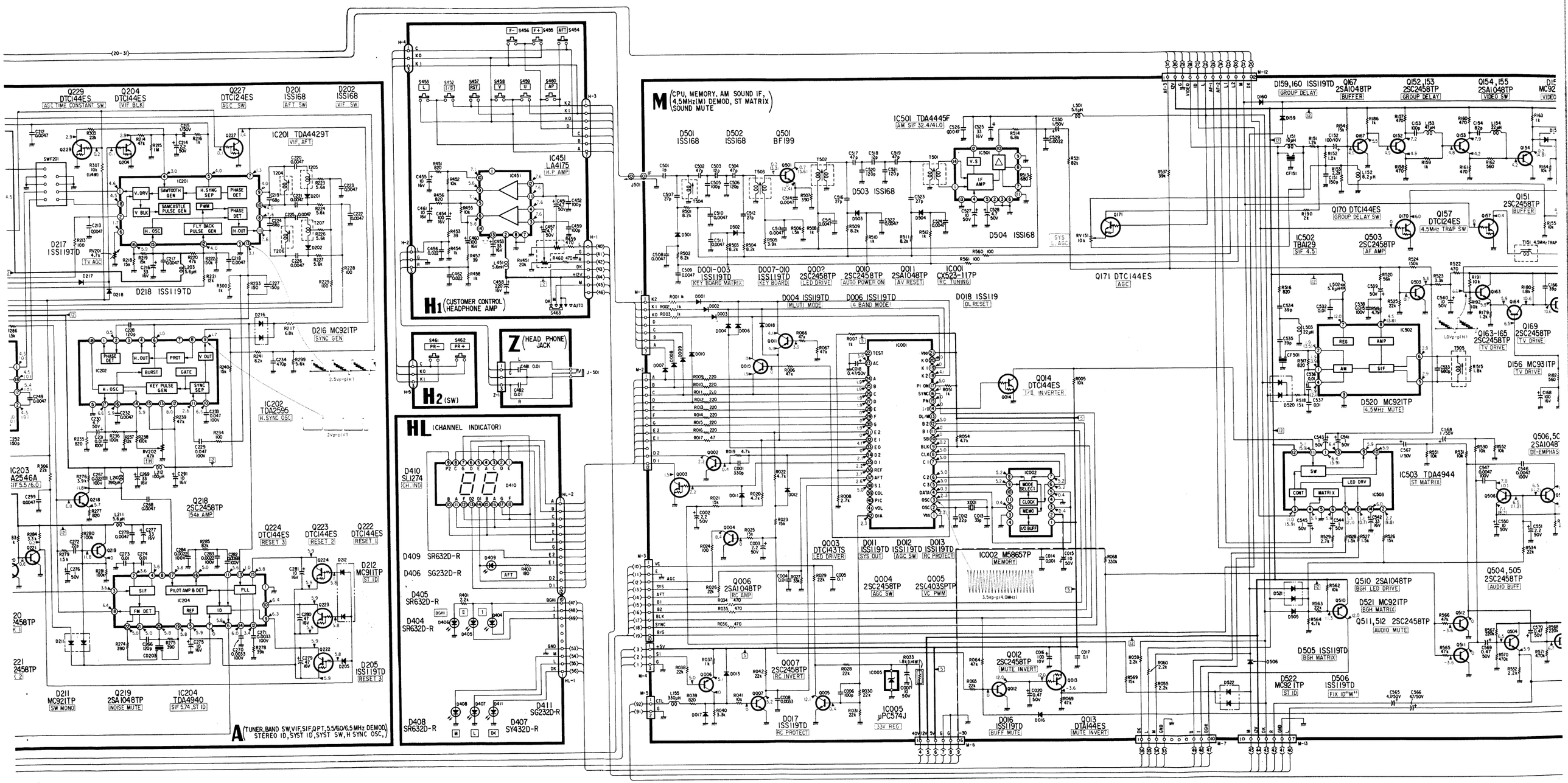
NOTE:

- All capacitors are in μF unless otherwise noted. pF; μμF 50 WV or less are not indicated except for electrolytics.
- All resistors are in ohms, 1/6 W unless otherwise noted. k: 1000 Ω, M: 1000 kΩ
- : nonflammable resistor.
- △ : internal component.
- : panel designation.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- All voltages are in V.
- Voltages are dc with respect to ground unless otherwise noted.
- Readings are taken with a 10 MΩ digital multimeter.
- Voltages are taken with set selected to CH-46 (UHF) position.
- : adjustment for repair.
- Readings are taken with a system G stereo signal input.
- Voltage variations may be noted due to normal produc tion tolerances.
- no mark: CCIR system G
  ( ): French system L
- ▬▬ : B+ bus
- ▬ ▬ : B− bus

4-4. SCHEMATIC DIAGRAM



13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29


A (TUNER, BAND SW, VIF, SIF, QPT, 5.5/6.0/6.5 MHz DEMOD, STEREO ID, SYST ID, SYST SW, H SYNC OSC,)
M (CPU, MEMORY, AM SOUND IF, 4.5MHz(M) DEMOD, ST MATRIX, SOUND MUTE)
H1 (CUSTOMER CONTROL, HEADPHONE AMP)
H2 (SW)
HL (CHANNEL INDICATOR)
Z (HEAD PHONE JACK)
Q229 DTC144ES AGC TIME CONSTANT SW
Q204 DTC144ES VIF BLK
Q227 DTC124ES AGC SW
D201 ISS168 AFT SW
D202 ISS168 VIF SW
IC201 TDA4429T VIF APT
IC451 LA4175 H.P AMP
IC501 TDA4445F AM SIF 32.4/41.0
D501 ISS168
D502 ISS168
Q501 BF199
D503 ISS168
D504 ISS168
Q171 DTC144ES AGC
D159,160 ISS119TD GROUP DELAY
Q167 2SA1048TP BUFFER
Q152,153 2SC2458TP GROUP DELAY
Q154,155 2SA1048TP VIDEO SW
Q170 DTC144ES GROUP DELAY SW
Q157 DTC124ES 4.5MHz TRAP SW
Q151 2SC2458TP BUFFER
IC502 TBA129 SIF 4.5
Q503 2SC2458TP AF AMP
Q169 2SC2458TP TV DRIVE
Q163-165 2SC2458TP TV DRIVE
IC502 REG AM SIF
D520 MC921TP 4.5MHz MUTE
D156 MC931TP TV DRIVE
IC503 TDA4944 ST MATRIX
Q506,505 2SA1048TP DE-EMPHAS
Q504,505 2SC2458TP AUDIO BUFF
Q510 2SA1048TP BGH LED DRIVE
D521 MC921TP BGH MATRIX
Q511,512 2SC2458TP AUDIO MUTE
D505 ISS119TD BGH MATRIX
D522 MC921TP ST ID
D506 ISS119TD FIX ID"M"1
D217 ISS119TD TV AGC
D218 ISS119TD
D216 MC921TP SYNC GEN
IC202 TDA2595 H.SYNC OSC
IC203 A2546A SIF 5.5/6.0
Q218 2SC2458TP 54k AMP
Q224 DTC144ES RESET 3
Q223 DTC144ES RESET 2
Q222 DTC144ES RESET 1
D212 MC911TP ST ID
D205 ISS119TD RESET 3
D211 MC921TP SW MONO
Q219 2SA1048TP NOISE MUTE
IC204 TDA4940 SIF 5.74, ST ID
D001-003 ISS119TD KEY BOARD MATRIX
D007-010 ISS119TD KEY BOARD
Q002 2SC2458TP LED DRIVE
Q010 2SC2458TP AUTO POWER ON
Q011 2SA1048TP AV RESET
IC001 CX523-117P RC TUNING
D004 ISS119TD MUTI MODE
D006 ISS119TD 4 BAND MODE
D018 ISS119 DL RESET
Q014 DTC144ES T/T INVERTER
IC001 MOST SELECT CLOCK MEMO I/O BUFF
IC002 M58657P MEMORY
Q003 DTC143TS LED DRIVER
D011 ISS119TD SYS OUT
D012 ISS119TD AGC SW
D013 ISS119TD RC PROTECT
Q006 2SA1048TP RC AMP
Q004 2SC2458TP AGC SW
Q005 2SC4035PTP VC PWM
Q012 2SC2458TP MUTE INVERT
D016 ISS119TD BUFF MUTE
Q013 DTA144ES MUTE INVERT
D017 ISS119TD RC PROTECT
IC005 μPC574J 3.3V REG
D410 SLI274 CH. IND
D409 SR632D-R
D406 SG232D-R
D405 SR632D-R
D404 SR632D-R
D408 SR632D-R
D407 SY432D-R
D411 SG232D-R

VTX-1100M RM-669
VTX-1100M RM-669

20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35

A B C D E F G H I J

M (CPU, MEMORY, AM SOUND IF, 4.5MHz(M) DEMOD, ST MATRIX, SOUND MUTE)

K (TV OUT)

D501 ISS168 D502 ISS168 Q501 BF199

IC501 TDA4445F AM SIF 32.4/41.0

D503 ISS168 D504 ISS168

D159,160 ISS119TD GROUP DELAY

Q167 2SA1048TP BUFFER

Q152,153 2SC2458TP GROUP DELAY

Q154,155 2SA1048TP VIDEO SW

D158 MC921TP VIDEO SW

Q156 DTC144ES GROUP DELAY SW

Q158 2SC2458TP POWER ON RESET

D151 RD10E-B2TN POWER ON RESET

Q170 DTC144ES GROUP DELAY SW

Q157 DTC124ES 4.5MHz TRAP SW

Q151 2SC2458TP BUFFER

IC502 TBA129 SIF 4.5

Q503 2SC2458TP AF AMP

D001-003 ISS119TD KEY BOARD MATRIX

D007-010 ISS119TD KEY BOARD

Q002 2SC2458TP LED DRIVE

Q010 2SC2458TP AUTO POWER ON

Q011 2SA1048TP AV RESET

IC001 CX523-117P RC TUNING

Q171 DTC144ES AGC

D004 ISS119TD MULTI MODE

D006 ISS119TD 4 BAND MODE

D018 ISS119 DL RESET

Q014 DTC144ES T/E INVERTER

Q163-165 2SC2458TP TV DRIVE

Q169 2SC2458TP TV DRIVE

D156 MC931TP TV DRIVE

D157 MC931TP PROTEC TV OUT

Q166 2SA1048TP TV DRIVE

D520 MC921TP 4.5MHz MUTE

Q506,507 2SA1048TP DE-EMPHASIS SW

IC503 TDA4944 ST MATRIX

Q003 DTC143TS LED DRIVER

D011 ISS119TD SYS OUT

D012 ISS119TD AGC SW

D013 ISS119TD RC PROTECT

IC002 M58657P MEMORY

Q006 2SA1048TP RC AMP

Q004 2SC2458TP AGC SW

Q005 2SC403SPTP VC PWM

Q007 2SC2458TP RC INVERT

IC005 μPC574J 3.3V REG

Q012 2SC2458TP MUTE INVERT

D016 ISS119TD BUFF MUTE

Q013 DTA144ES MUTE INVERT

Q510 2SA1048TP BGH LED DRIVE

D521 MC921TP BGH MATRIX

Q511,512 2SC2458TP AUDIO MUTE

D505 ISS119TD BGH MATRIX

D522 MC921TP ST ID

D506 ISS119TD FIX ID"M"

Q504,505 2SC2458TP AUDIO BUFF

D516 MC921TP PROTECTION AUDIO OUT

D518 MC911TP PROTECTION AUDIO OUT

KP 702

VTX-1100M
RM-669

4-5. PRINTED WIRING BOARDS

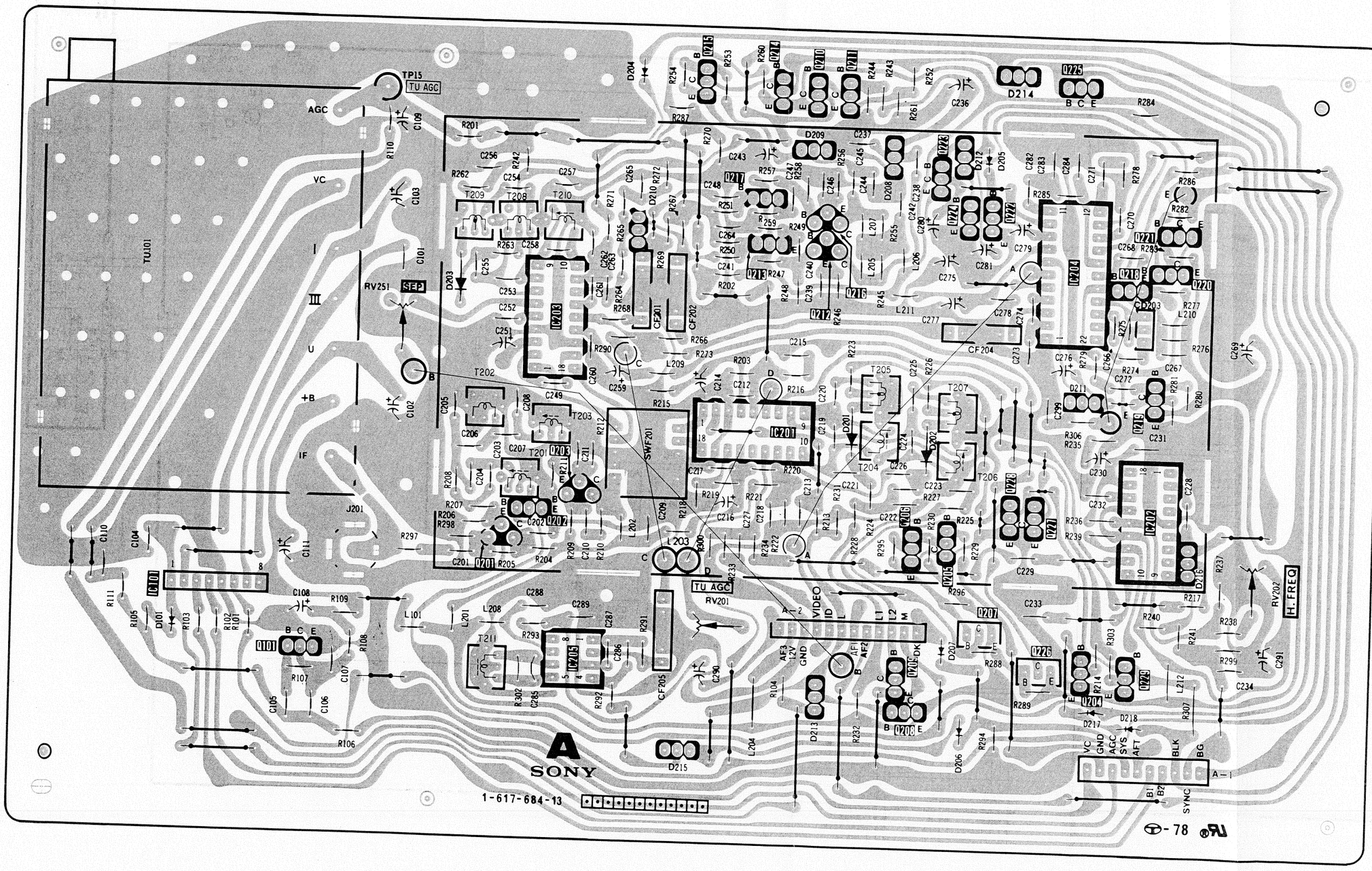
– Conductor Side –

A [TUNER, BAND SW, VIF, SIF, QPT, 5.5/6.0/6.5 MHz DEMOD, STEREO ID, SYST ID, SYST SW, H SYNC OSC]

M [CPU, MEMORY, AM SOUND IF, 4.5 MHz (M) DEMOD, ST MATRIX, SOUND MUTE]

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17

– A Board –



IC , Q	D	ADJ
215 225 214,210,211	214 204	
223	209 208,212	
217 224,222 216 221 213, 212 IC204 220 218	210 203	
IC203		RV251
219	211	
IC201	201 202	
203 228,227 202 IC202 201 205 206		RV202 RV201
226 101, IC205, 204,229 209 208	101 217 218 206	

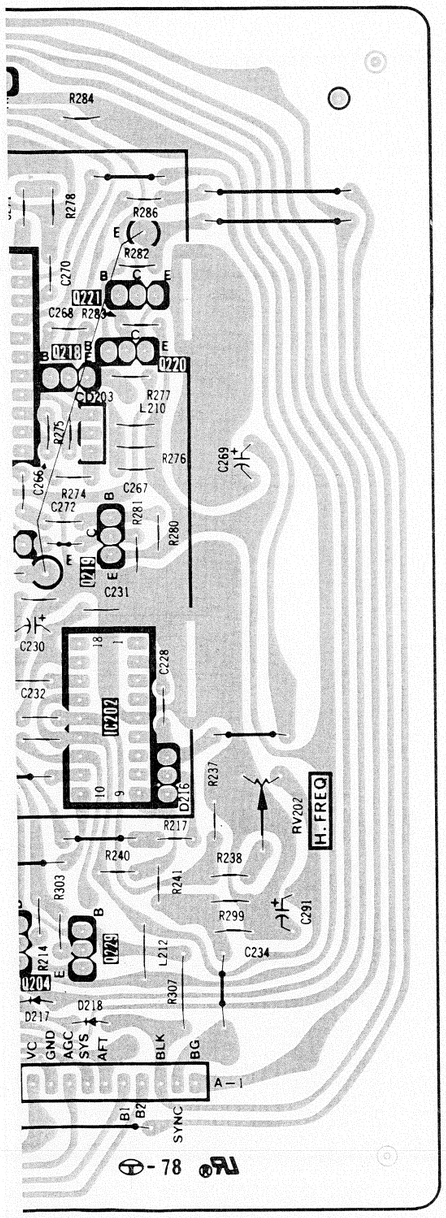
IC , Q | D | ADJ

M [CPU, MEMORY, AM SOUND IF, 4.5 MHz (M) DEMOD, ST MATRIX, SOUND MUTE]

H1 [CUSTOMER CONTROL HEADPHONE AMP]

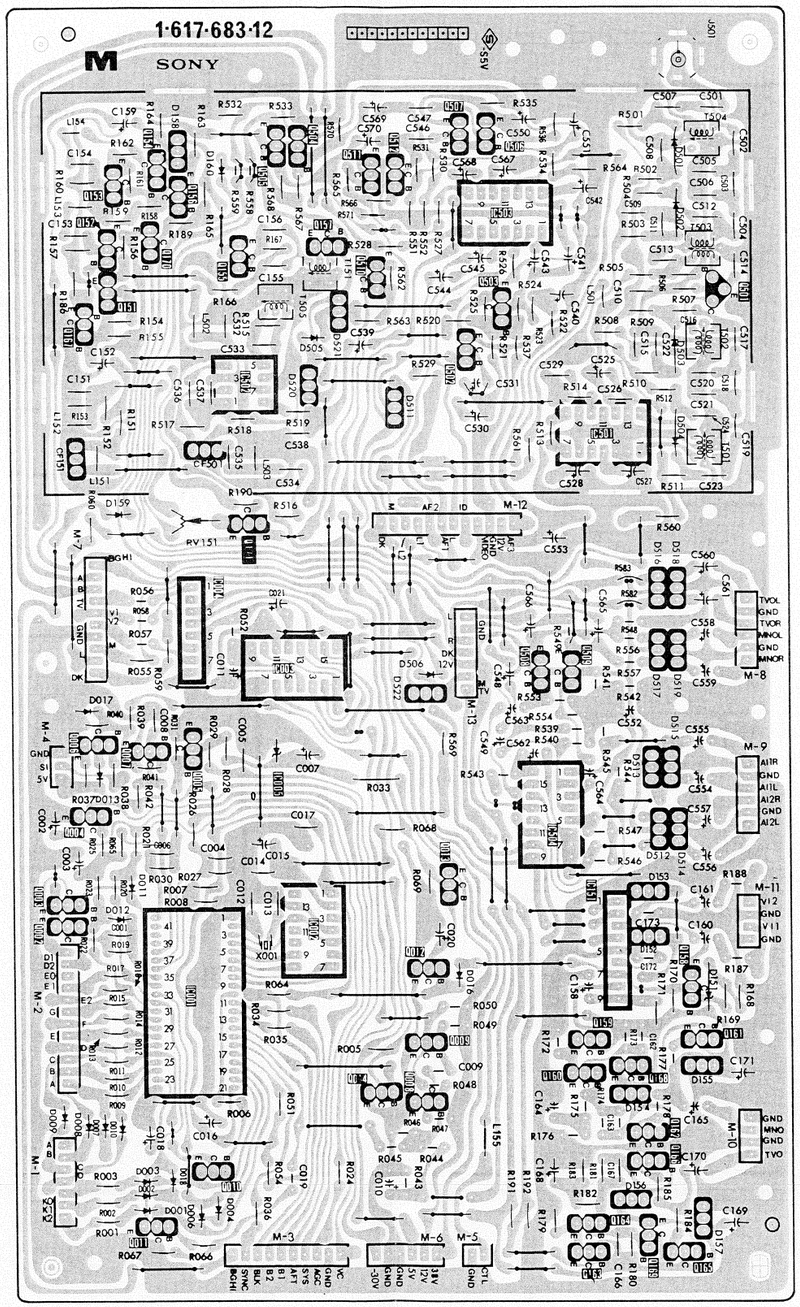
H2

12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28



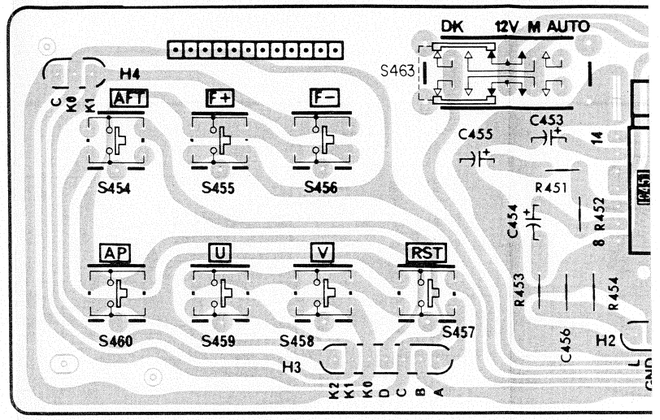
IC , Q	D	ADJ
225	214	
215	204	
214,210,211		
	209	
	208,212	
223		
217		
224,222		
216 221	210	
213, 212		
IC204		
220		
218	203	
IC203		RV251
219	211	
IC201	201	
	202	
203	228,227	
202	IC202	
	205	
201	206	
		RV202
		RV201
226	101	
101, IC205, 204,229		
209		
	217	
208	218	
	206	

– M Board –

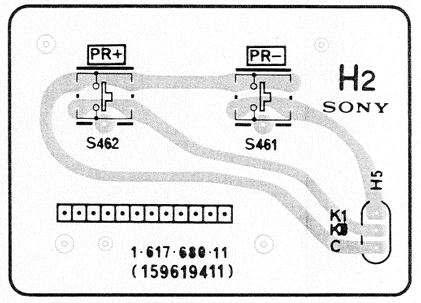


IC , Q	D	ADJ
507,506		
505,504	158,501	
154	160	
153		
156	502	
IC503		
170	157	
152	155	
510		
151	501	
503		
167	521	
502	505	503
IC502	520	
	511	
IC501	504	
	159	
171		RV151
	516,518	
	506	
	522	
	017	
IC005		
006,007, 005	013	
004		
013	011	
003	012	
002, IC002		
012	016	
158		
IC001		
014	009	
	008	
	007	
	010	
010	166	
	003,018	
	002 156	
	001,004	
	006 157	
011	164	
	163,165	

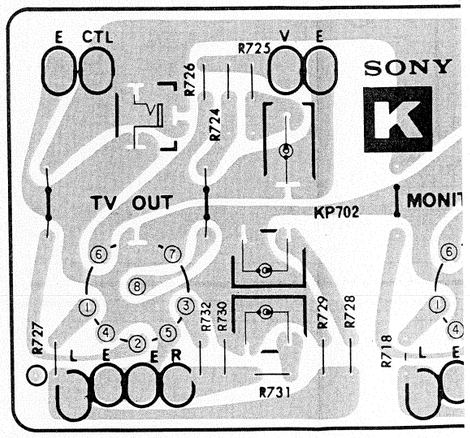
– H1 Board –



– H2 Board –



– K Board –

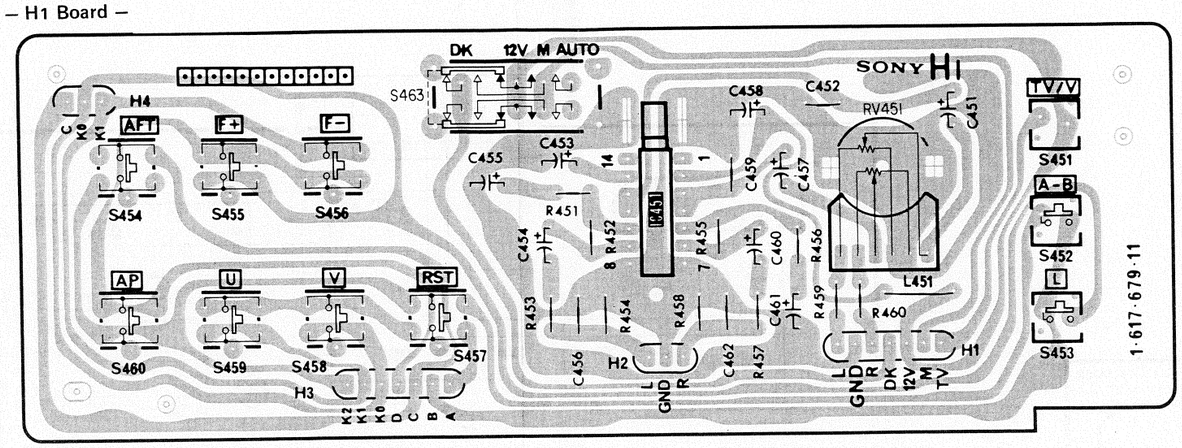


H1 [CUSTOMER CONTROL HEADPHONE AMP] **H2** [SW] **K** [TV OUT] **Z** [HEAD PHONE JACK] **N** [REMOCON RECEIVE]

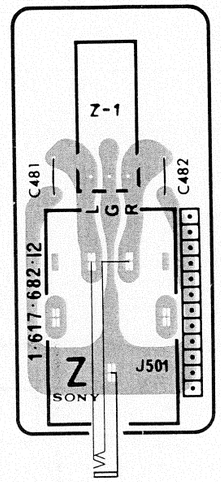
20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35

A B D E F G H

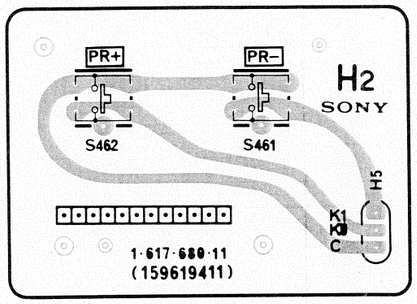
– H1 Board –



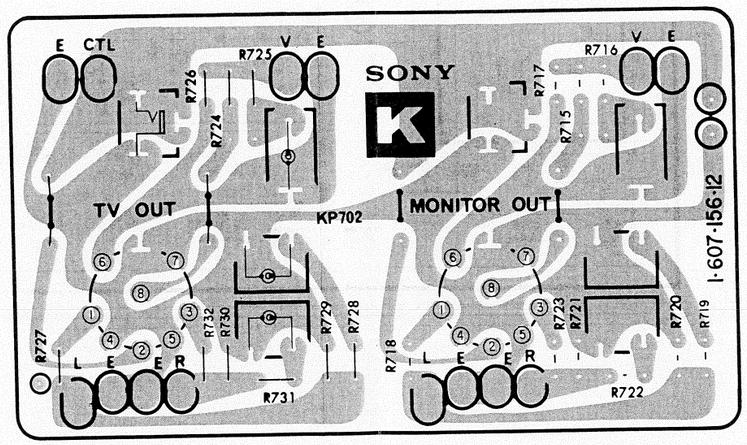
– Z Board –



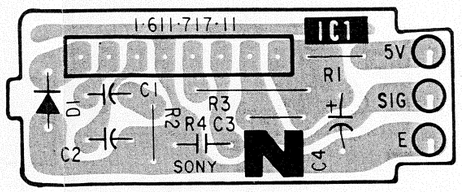
– H2 Board –

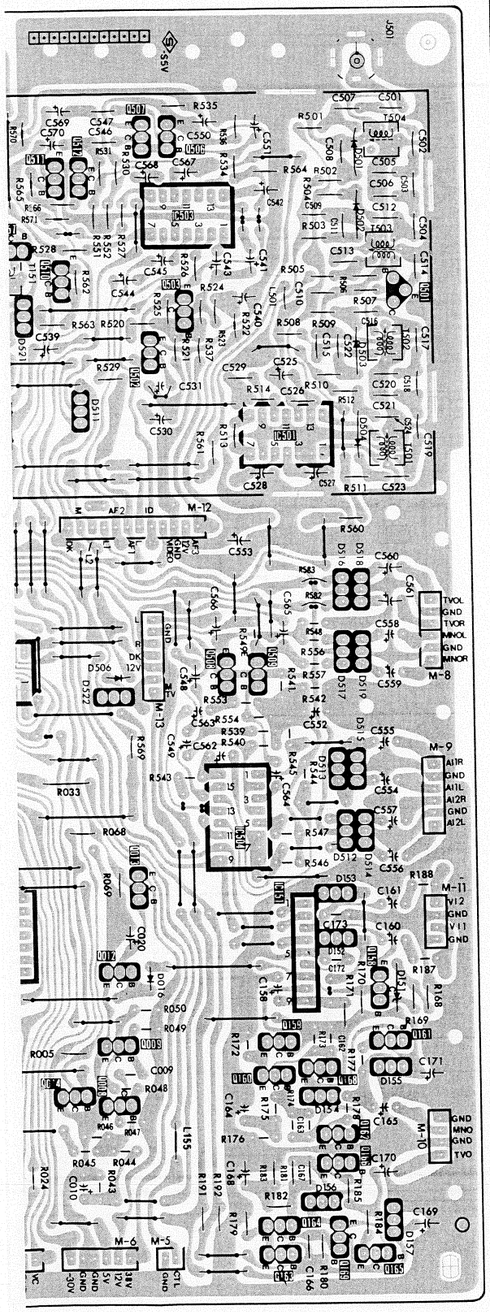


– K Board –



– N Board –





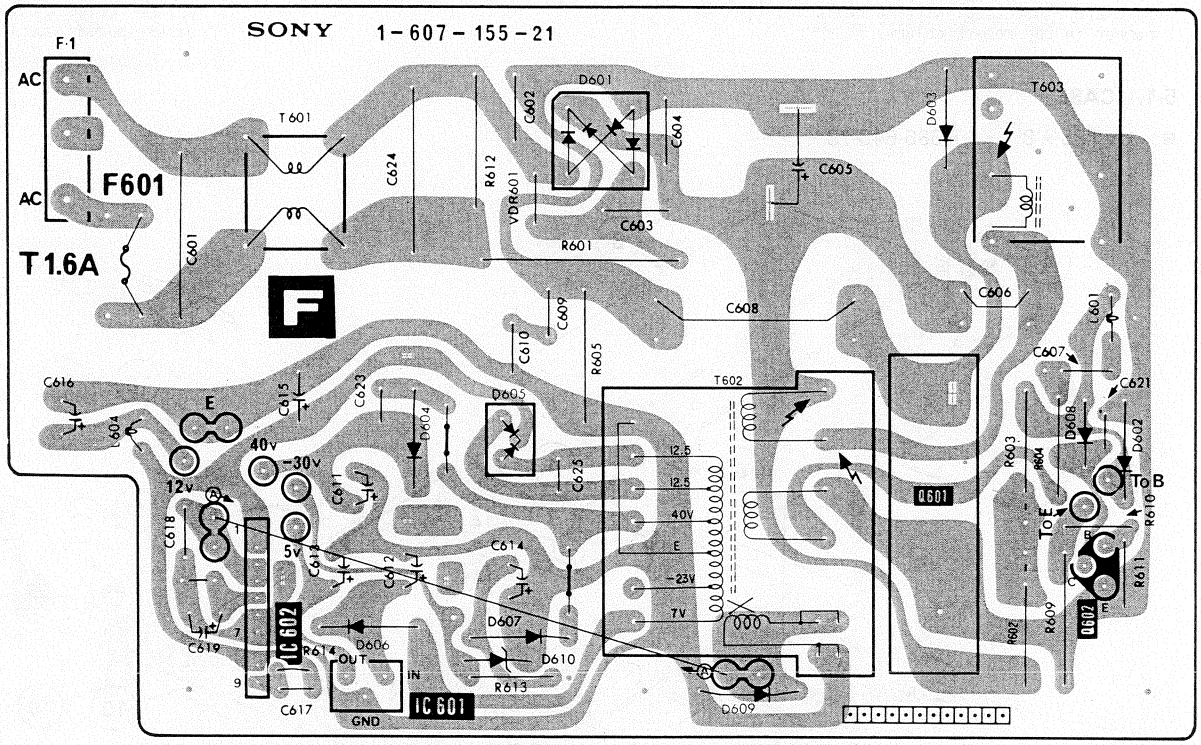
IC, Q	D	ADJ
507,506		
505,504	158,501	
154	160	
153		
156		
IC503	502	
170		
157		
152		
155		
510		
501		
151		
503	521	
167		
502	505	
	503	
IC502	520	
	511	
IC501	504	
	159	
171		RV151
	516,518	
	506	
	522	
	017	
IC005		
006,007, 005	013	
004		
013	011	
003	012	
002, IC002		
012	016	
158		
IC001		
014	009	
	008	
	007	
	010	
010	166	
	003,018	
	002	156
	001,004	
011	006	157
164		
163,165		
IC, Q	D	ADJ

F [POWER SUPPLY, REG DRIVE] HL [CHANNEL INDICATOR]

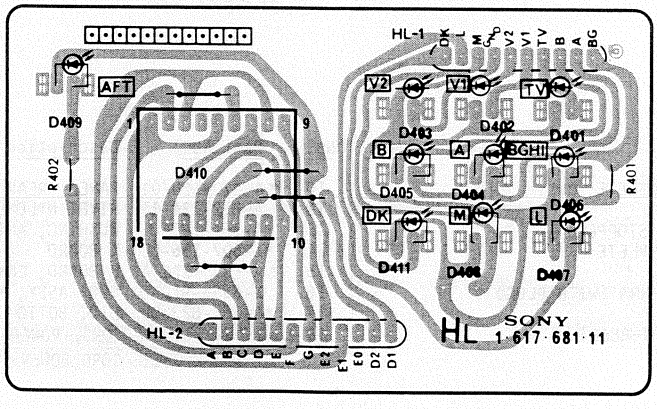
1 2 3 4 5 6 7

A B C D E F G H I

– F Board –



– HL Board –



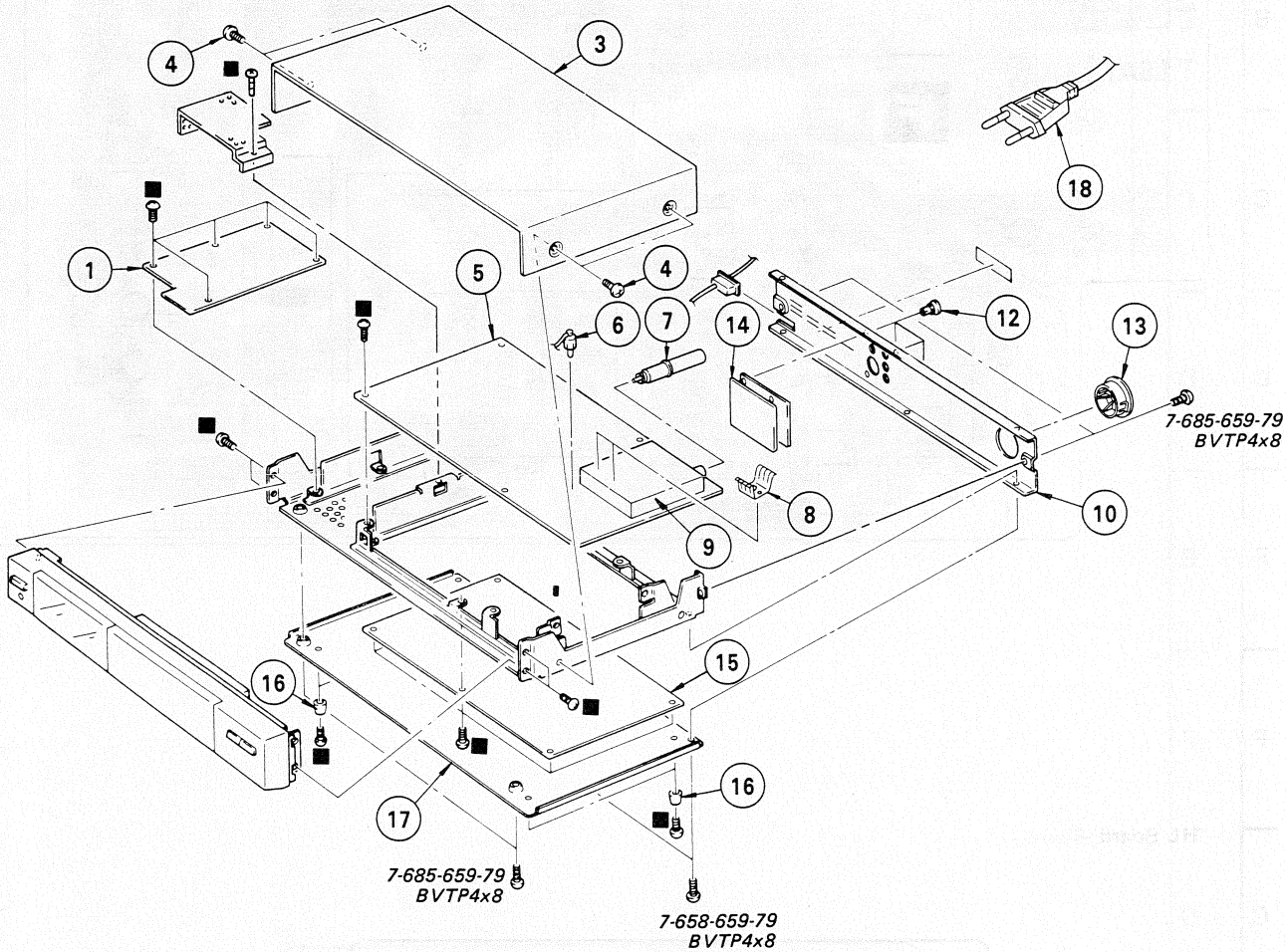
SECTION 5
EXPLODED VIEWS

NOTE:
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " ★ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

5-1. CASE

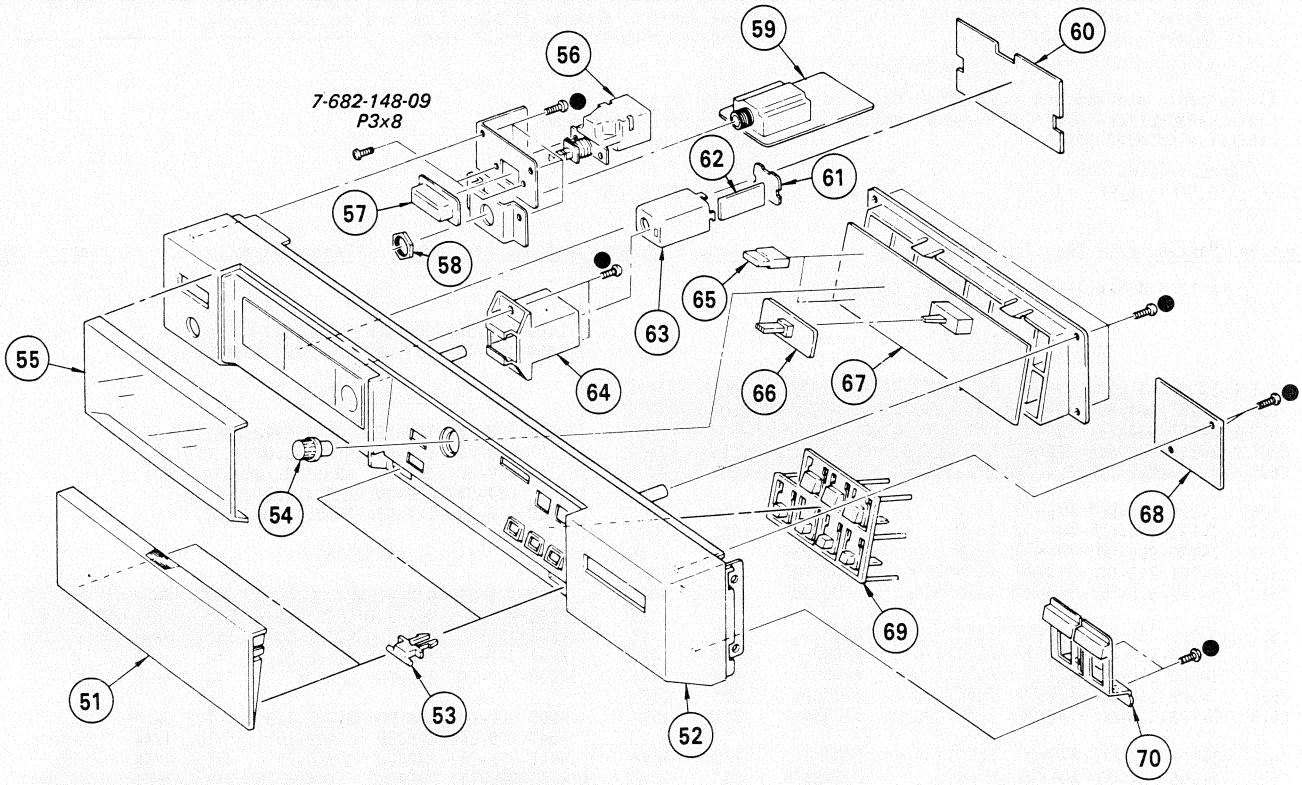
■ : BVTP3 x 8 7-685-646-79



No.	Part No.	Description	Remark
1	*A-1245-405-A	F BOARD, COMPLETE	
3	*4-379-521-01	CASE	
4	4-847-802-11	SCREW, CASE STOPPER	
5	*A-1296-330-A	A BOARD, COMPLETE	
6	*1-555-110-00	CABLE, PIN	
7	⚠.1-526-854-11	SOCKET, ANTENNA (WITH PLUG)	
8	4-302-978-00	SPRING	
9	⚠.1-463-661-21	TUNER, ET (BT-886D)	
10	*4-379-520-01	PANEL, REAR	
12	4-812-134-11	RIVET NYLON, 3.5	
13	4-361-188-01	BUSHING, ANTENNA GUIDE	
14	*1-607-156-00	K BOARD	
15	*A-1306-376-A	M BOARD, COMPLETE	
16	X-3556-910-0	FOOT ASSY, MF	
17	*4-357-823-00	LID, BOTTOM	
18	⚠.1-551-732-21	CORD, POWER (FOR AS)	
	⚠.1-551-270-11	CORD POWER	

5-2. FRONT PANEL

● : BVTP3 x 12 7-685-648-79



No.	Part No.	Description	Remark
51	X-4357-851-1	DOOR ASSY	
52	X-4357-852-1	PANEL ASSY, FRONT	
53	3-703-035-11	SHAFT, LID	
54	4-357-814-00	KNOB, CONTROL	
55	4-357-816-00	COVER, TRANSPARENT	
56	⚠1-570-052-12	SWITCH, PUSH (AC POWER)(1 KEY)	
57	4-379-513-01	BUTTON, POWER	
58	4-369-780-01	NUT	
59	*1-617-682-11	Z BOARD	
60	*1-617-681-11	HL BOARD	
61	*4-342-118-00	LID, SHIELD CASE, R	
62	*1-611-717-11	N BOARD	
63	*4-342-117-00	CASE, SHIELD (MAIN), R	
64	*4-357-119-00	BRACKET, CATCHER, RAY	
65	4-357-804-00	BUTTON, ANTENNA	
66	4-361-184-01	BUTTON, ID	
67	*1-617-679-11	H1 BOARD	
68	*1-617-680-11	H2 BOARD	
69	4-357-815-00	BUTTON, FUNCTION	
70	4-379-516-01	BUTTON, PROGRAM	

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

F N

SECTION 6
ELECTRICAL PARTS LIST

NOTE:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

- Items marked " ★ " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

When indicating parts by reference number, please include the board name.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

CAPACITORS
- MF : μF, PF : μμF

RESISTORS
- All resistors are in ohms
- F : nonflammable

COILS
- MMH : mH, UH : μH

Ref.No.	Part No.	Description			Remark
	*A-1245-405-A	F BOARD, COMPLETE			
		**********			
		CAPACITOR			
C601	⚠.1-108-745-62	MYLAR	0.22MF	20% 300V	
C602	⚠.1-161-964-61	CERAMIC	0.0047MF	250V	
C603	⚠.1-161-964-61	CERAMIC	0.0047MF	250V	
C604	⚠.1-161-964-61	CERAMIC	0.0047MF	250V	
C605	⚠.1-125-291-11	ELECT(BLOCK)	100MF	20% 400V	
C606	1-136-131-00	FILM	0.12MF	5% 400V	
C607	1-136-104-00	FILM	0.16MF	5% 200V	
C608	1-130-908-00	FILM	0.0039MF	3% 1.6KV	
C609	1-161-743-00	CERAMIC	0.0047MF	400V	
C610	1-162-578-00	CERAMIC	0.0047MF	20% 400V	
C611	1-123-361-00	ELECT	220MF	20% 50V	
C612	1-123-310-00	ELECT	470MF	20% 10V	
C613	1-123-310-00	ELECT	470MF	20% 10V	
C614	1-123-336-00	ELECT	470MF	20% 25V	
C615	1-123-326-00	ELECT	3300MF	20% 16V	
C616	1-123-324-00	ELECT	1000MF	20% 16V	
C617	1-106-184-00	MYLAR	0.0033MF	5% 50V	
C618	1-108-849-00	MYLAR	0.1MF	10% 50V	
C619	1-123-356-00	ELECT	10MF	20% 25V	
C621	1-130-487-00	MYLAR	0.022MF	5% 50V	
C623	1-106-359-00	MYLAR	0.0047MF	10% 100V	
C624	⚠.1-108-745-62	MYLAR	0.22MF	20% 300V	
C625	1-136-060-00	FILM	0.047MF	5% 400V	
		DIODE			
D601	⚠ 8-719-503-06	DIODE S3WB60Z			
D602	8-719-901-40	DIODE SIB01-02T5			
D603	8-719-305-15	DIODE GH3F			
D604	8-719-918-77	DIODE V19G			
D605	8-719-920-40	DIODE ESAC82-004			
D606	8-719-982-04	DIODE ERB81-004			
D607	8-719-918-77	DIODE V19G			
D608	8-719-911-55	DIODE U05G			
D609	8-719-200-02	DIODE 10E2			
D610	8-719-100-98	DIODE RD30E-B2			
		CONNECTOR			
F1	*1-506-348-XX	3P PLUG (L)			
		FUSE			
F601	⚠.1-532-259-11	FUSE, TIME-LAG 1.6A/250V			
	*1-533-146-00	HOLDER, FUSE; F601			
		IC			
IC601	8-759-170-05	IC UPC78M05H			
		MODULE			
IC602	⚠.1-235-122-11	POWER MODULE			
		COIL			
L601	1-459-395-00	COIL (WITH CORE)			
L604	1-459-155-00	COIL (WITH CORE) 45UH			
		TRANSISTOR			
Q601	8-729-300-28	TRANSISTOR 2SC1942-16L			
	3-701-353-00	SPACER, MICA; Q601			
	3-701-609-00	BUSHING (B), TR; Q601			
	*4-357-809-00	RETAINER, TR; Q601			
Q602	8-729-177-43	TRANSISTOR 2SD774			
		RESISTOR			
R601	⚠.1-217-333-11	WIREWOUND	10	10% 7W	F
R602	⚠.1-216-466-51	METAL OXIDE	39K	5% 2W	F
R603	⚠.1-216-466-51	METAL OXIDE	39K	5% 2W	F
R604	1-212-368-00	METAL OXIDE	4.7	5% 1W	F
R605	1-247-289-00	CARBON	8.2M	5% 1W	
R609	1-207-907-00	WIREWOUND	1.2	10% 3W	F
R610	1-246-449-25	CARBON	100	5% 1/4W	
R611	1-247-707-11	CARBON	390	5% 1/4W	
R612	⚠.1-247-289-11	CARBON	8.2M	5% 1W	F
R613	1-216-431-11	METAL OXIDE	560	5% 1W	F
R614	1-249-435-11	CARBON	33K	5% 1/6W	
		TRANSFORMER			
T601	⚠.1-421-352-11	TRANSFORMER, FERRITE			
T602	⚠.1-421-528-11	TRANSFORMER, FERRITE (POT)			
T603	1-421-527-00	COIL, FERRITE-CHOKE (PCC)			
		VARISTOR			
VDR601	⚠.1-806-446-11	VARISTOR			
		**********			
	*1-611-717-11	N BOARD			
		*******			
	*4-342-117-00	CASE, SHIELD (MAIN), R			
	*4-342-118-00	LID, SHIELD CASE, R			
		CAPACITOR			
C1	1-123-611-00	ELECT	1MF	20% 50V	
C2	1-124-258-00	ELECT	3.3MF	20% 50V	
C3	1-102-112-00	CERAMIC	330PF	10% 50V	
C4	1-124-236-00	ELECT	47MF	20% 16V	
		DIODE			
D1	8-719-110-32	DIODE PH302B			
		IC			
IC1	8-759-602-54	IC CX20106A			

Ref.No.	Part No.	Description				Remark
		RESISTOR				
R1	1-249-401-11	CARBON	47	5%	1/6W	
R2	1-247-775-00	CARBON	4.7	5%	1/6W	
R3	1-214-784-00	METAL	200K	1%	1/4W	
R4	1-249-433-11	CARBON	22K	5%	1/6W	
**********						
	*A-1296-330-A	A BOARD, COMPLETE				
		**********				
		CONNECTOR				
A1	*1-560-224-00	PLUG, CONNECTOR (2.5MM) 10P				
A2	*1-560-156-00	PLUG, CONNECTOR (2.5MM PITCH)				
		CAPACITOR				
C101	1-108-837-00	MYLAR	0.01MF	10%	50V	
C102	1-123-356-00	ELECT	10MF	20%	16V	
C103	1-123-356-00	ELECT	10MF	20%	16V	
C104	1-108-837-00	MYLAR	0.01MF	10%	50V	
C105	1-136-163-00	FILM	0.068MF	5%	50V	
C106	1-136-163-00	FILM	0.068MF	5%	50V	
C107	1-102-963-00	CERAMIC	33PF	5%	50V	
C108	1-123-318-00	ELECT	33MF	20%	16V	
C109	1-123-356-00	ELECT	10MF	20%	16V	
C110	1-136-165-00	FILM	0.1MF	5%	50V	
C111	1-124-475-11	ELECT	470MF	20%	16V	
C201	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C202	1-102-125-00	CERAMIC	0.0047MF	10%	50V	
C203	1-101-969-00	CERAMIC	5PF	0.5PF	50V	
C204	1-101-969-00	CERAMIC	5PF	0.5PF	50V	
C205	1-102-816-00	CERAMIC	120PF	5%	50V	
C206	1-101-361-00	CERAMIC	150PF	5%	50V	
C207	1-102-951-00	CERAMIC	15PF	5%	50V	
C208	1-102-523-00	CERAMIC	56PF	5%	50V	
C209	1-102-125-00	CERAMIC	0.0047MF	10%	50V	
C210	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C211	1-102-125-00	CERAMIC	0.0047MF	10%	50V	
C212	1-102-125-00	CERAMIC	0.0047MF	10%	50V	
C213	1-102-125-00	CERAMIC	0.0047MF	10%	50V	
C214	1-123-381-00	ELECT	2.2MF	20%	50V	
C215	1-124-002-11	ELECT	1MF	20%	50V	
C216	1-123-318-00	ELECT	33MF	20%	16V	
C217	1-102-125-00	CERAMIC	0.0047MF	10%	50V	
C218	1-102-125-00	CERAMIC	0.0047MF	10%	50V	
C219	1-102-621-00	CERAMIC	68PF	5%	50V	
C220	1-102-125-00	CERAMIC	0.0047MF	10%	50V	
C221	1-102-125-00	CERAMIC	0.0047MF	10%	50V	
C222	1-102-125-00	CERAMIC	0.0047MF	10%	50V	
C223	1-102-125-00	CERAMIC	0.0047MF	10%	50V	
C224	1-102-621-00	CERAMIC	68PF	5%	50V	
C225	1-102-125-00	CERAMIC	0.0047MF	10%	50V	
C226	1-102-125-00	CERAMIC	0.0047MF	10%	50V	

Ref.No.	Part No.	Description				Remark
C227	1-101-361-00	CERAMIC	150PF	5%	50V	
C228	1-102-816-00	CERAMIC	120PF	5%	50V	
C229	1-108-634-81	MYLAR	0.047MF	10%	100V	
C230	1-123-369-00	ELECT	4.7MF	20%	50V	
C231	1-106-367-00	MYLAR	0.01MF	10%	100V	
C232	1-103-741-00	POLYSTYRENE	0.0047MF	5%	50V	
C233	1-108-634-81	MYLAR	0.047MF	10%	100V	
C234	1-102-824-00	CERAMIC	470PF	5%	50V	
C236	1-123-379-00	ELECT	0.47MF	20%	50V	
C237	1-102-949-00	CERAMIC	12PF	5%	50V	
C238	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C239	1-161-051-00	CERAMIC	0.01MF	10%	50V	
C240	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C241	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C242	1-102-125-00	CERAMIC	0.0047MF	10%	50V	
C243	1-123-379-00	ELECT	0.47MF	20%	50V	
C244	1-102-949-00	CERAMIC	12PF	5%	50V	
C245	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C246	1-161-051-00	CERAMIC	0.01MF	10%	50V	
C247	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C248	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C249	1-102-125-00	CERAMIC	0.0047MF	10%	50V	
C251	1-123-379-00	ELECT	0.47MF	20%	50V	
C252	1-101-361-00	CERAMIC	150PF	5%	50V	
C253	1-104-294-11	POLYSTYRENE	470PF	5%	50V	
C254	1-102-125-00	CERAMIC	0.0047MF	10%	50V	
C255	1-102-125-00	CERAMIC	0.0047MF	10%	50V	
C256	1-161-051-00	CERAMIC	0.01MF	10%	50V	
C257	1-161-051-00	CERAMIC	0.01MF	10%	50V	
C258	1-102-621-00	CERAMIC	68PF	5%	50V	
C259	1-123-318-00	ELECT	33MF	20%	16V	
C260	1-102-125-00	CERAMIC	0.0047MF	10%	50V	
C261	1-161-051-00	CERAMIC	0.01MF	10%	50V	
C262	1-161-051-00	CERAMIC	0.01MF	10%	50V	
C263	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C264	1-161-051-00	CERAMIC	0.01MF	10%	50V	
C265	1-161-051-00	CERAMIC	0.01MF	10%	50V	
C266	1-102-816-00	CERAMIC	120PF	5%	50V	
C267	1-130-072-00	FILM	0.022MF	2%	100V	
C268	1-102-125-00	CERAMIC	0.0047MF	10%	50V	
C269	1-123-318-00	ELECT	33MF	20%	16V	
C270	1-108-620-91	MYLAR	0.0033MF	10%	100V	
C271	1-108-620-91	MYLAR	0.0033MF	10%	100V	
C272	1-102-959-00	CERAMIC	22PF	5%	50V	
C273	1-101-004-00	CERAMIC	0.01MF		50V	
C274	1-101-004-00	CERAMIC	0.01MF		50V	
C275	1-123-356-00	ELECT	10MF	20%	16V	
C276	1-123-380-00	ELECT	1MF	20%	50V	
C277	1-123-318-00	ELECT	33MF	20%	16V	
C278	1-102-125-00	CERAMIC	0.0047MF	10%	50V	
C279	1-123-332-00	ELECT	47MF	20%	16V	
C280	1-123-332-00	ELECT	47MF	20%	16V	
C281	1-123-356-00	ELECT	10MF	20%	16V	

Ref.No.	Part No.	Description			Remark
C282	1-106-192-00	MYLAR	0.0068MF	10%	100V
C283	1-108-618-91	MYLAR	0.0022MF	10%	100V
C284	1-108-618-91	MYLAR	0.0022MF	10%	100V
C285	1-104-065-00	POLYSTYRENE	330PF	5%	50V
C286	1-101-004-00	CERAMIC	0.01MF		50V
C287	1-101-004-00	CERAMIC	0.01MF		50V
C288	1-101-004-00	CERAMIC	0.01MF		50V
C289	1-108-837-00	MYLAR	0.01MF	10%	50V
C290	1-123-380-00	ELECT	1MF	20%	50V
C291	1-123-356-00	ELECT	10MF	20%	16V
C299	1-102-125-00	CERAMIC	0.0047MF	10%	50V
		FILTER			
CD203	1-404-501-00	DISCRIMINATOR, CERAMIC			
CF201	1-567-569-11	FILTER, CERAMIC			
CF202	1-527-840-00	FILTER, CERAMIC			
CF204	1-527-839-00	FILTER, CERAMIC			
CF205	1-567-570-11	FILTER, CERAMIC			
SWF201	1-404-438-00	FILTER, SAW			
		DIODE			
D101	8-719-911-19	DIODE 1SS119			
D201	8-719-903-27	DIODE 1SS168			
D202	8-719-903-27	DIODE 1SS168			
D203	8-719-903-27	DIODE 1SS168			
D204	8-719-911-19	DIODE 1SS119			
D205	8-719-911-19	DIODE 1SS119			
D206	8-719-911-19	DIODE 1SS119			
D207	8-719-911-19	DIODE 1SS119			
D208	8-719-000-12	DIODE MC931			
D209	8-719-000-12	DIODE MC931			
D210	8-719-000-12	DIODE MC931			
D211	8-719-000-06	DIODE MC921			
D212	8-719-000-04	DIODE MC911			
D213	8-719-000-04	DIODE MC911			
D214	8-719-000-06	DIODE MC921			
D215	8-719-000-06	DIODE MC921			
D216	8-719-000-06	DIODE MC921			
D217	8-719-911-19	DIODE 1SS119			
D218	8-719-911-19	DIODE 1SS119			
		IC			
IC101	8-759-602-16	IC M54572L			
IC201	8-759-911-16	IC TDA4429T			
	*4-369-734-01	HEAT SINK; IC201			
IC202	8-759-941-81	IC TDA2595-V6			
IC203	8-759-909-54	IC TDA2546A			
IC204	8-759-007-54	IC TDA4940			
IC205	8-759-003-90	IC TBA129			
		JACK			
J201	1-526-575-00	SOCKET, PLUG			

Ref.No.	Part No.	Description	Remark
		COIL	
L101	1-407-489-00	MICRO INDUCTOR 560UH	
L201	1-408-406-00	MICRO INDUCTOR 5.6UH	
L202	1-408-593-00	MICRO INDUCTOR 1.5UH	
L203	1-408-406-00	MICRO INDUCTOR 5.6UH	
L204	1-408-225-00	MICRO INDUCTOR 3.3UH	
L205	1-408-417-00	MICRO INDUCTOR 47UH	
L206	1-408-406-00	MICRO INDUCTOR 5.6UH	
L207	1-408-417-00	MICRO INDUCTOR 47UH	
L208	1-408-406-00	MICRO INDUCTOR 5.6UH	
L209	1-408-406-00	MICRO INDUCTOR 5.6UH	
L210	1-408-428-00	MICRO INDUCTOR 390UH	
L211	1-408-406-00	MICRO INDUCTOR 5.6UH	
L212	1-407-705-00	MICRO INDUCTOR 100UH	
		TRANSISTOR	
Q101	8-729-178-54	TRANSISTOR 2SC2785	
Q201	8-729-901-59	TRANSISTOR BF199	
Q202	8-729-900-36	TRANSISTOR DTC124ES	
Q203	8-729-000-12	TRANSISTOR BF959	
Q204	8-729-900-89	TRANSISTOR DTC144ES	
Q205	8-729-178-54	TRANSISTOR 2SC2785	
Q206	8-729-900-89	TRANSISTOR DTC144ES	
Q207	8-729-113-32	TRANSISTOR 2SB733	
Q208	8-729-900-65	TRANSISTOR DTA144ES	
Q209	8-729-900-89	TRANSISTOR DTC144ES	
Q210	8-729-900-63	TRANSISTOR DTA124ES	
Q211	8-729-178-54	TRANSISTOR 2SC2785	
Q212	8-729-901-59	TRANSISTOR BF199	
Q213	8-729-178-54	TRANSISTOR 2SC2785	
Q214	8-729-900-63	TRANSISTOR DTA124ES	
Q215	8-729-178-54	TRANSISTOR 2SC2785	
Q216	8-729-901-59	TRANSISTOR BF199	
Q217	8-729-178-54	TRANSISTOR 2SC2785	
Q218	8-729-178-54	TRANSISTOR 2SC2785	
Q219	8-729-117-54	TRANSISTOR 2SA1175	
Q220	8-729-178-54	TRANSISTOR 2SC2785	
Q221	8-729-178-54	TRANSISTOR 2SC2785	
Q222	8-729-900-89	TRANSISTOR DTC144ES	
Q223	8-729-900-89	TRANSISTOR DTC144ES	
Q224	8-729-900-89	TRANSISTOR DTC144ES	
Q225	8-729-900-65	TRANSISTOR DTA144ES	
Q226	8-729-113-32	TRANSISTOR 2SB733	
Q227	8-729-900-36	TRANSISTOR DTC124ES	
Q228	8-729-900-89	TRANSISTOR DTC144ES	
Q229	8-729-900-89	TRANSISTOR DTC144ES	
		RESISTOR	
R101	1-249-424-11	CARBON 3.9K 5%	1/6W
R102	1-249-417-11	CARBON 1K 5%	1/6W
R103	1-249-417-11	CARBON 1K 5%	1/6W
R104	1-249-425-11	CARBON 4.7K 5%	1/6W
R105	1-215-493-00	CARBON 1M 5%	1/6W

Ref.No.	Part No.	Description				Remark
R106	1-249-433-11	CARBON	22K	5%	1/6W	
R107	1-247-891-00	CARBON	330K	5%	1/6W	
R108	1-249-421-11	CARBON	2.2K	5%	1/6W	
R109	1-249-421-11	CARBON	2.2K	5%	1/6W	
R110	1-249-425-11	CARBON	4.7K	5%	1/6W	
R111	1-249-423-11	CARBON	3.3K	5%	1/6W	
R112	1-249-401-11	CARBON	47	5%	1/6W	
R201	1-249-405-11	CARBON	100	5%	1/6W	
R202	1-249-423-11	CARBON	3.3K	5%	1/6W	
R203	1-249-428-11	CARBON	8.2K	5%	1/6W	
R204	1-249-409-11	CARBON	220	5%	1/6W	
R205	1-249-429-11	CARBON	10K	5%	1/6W	
R206	1-249-415-11	CARBON	680	5%	1/6W	
R207	1-249-397-11	CARBON	22	5%	1/6W	
R208	1-249-401-11	CARBON	47	5%	1/6W	
R209	1-249-425-11	CARBON	4.7K	5%	1/6W	
R210	1-249-407-11	CARBON	150	5%	1/6W	
R211	1-249-424-11	CARBON	3.9K	5%	1/6W	
R212	1-249-409-11	CARBON	220	5%	1/6W	
R213	1-249-405-11	CARBON	100	5%	1/6W	
R214	1-249-437-11	CARBON	47K	5%	1/6W	
R215	1-215-493-00	CARBON	1M	5%	1/6W	
R216	1-249-417-11	CARBON	1K	5%	1/6W	
R217	1-249-427-11	CARBON	6.8K	5%	1/6W	
R218	1-249-431-11	CARBON	15K	5%	1/6W	
R219	1-249-431-11	CARBON	15K	5%	1/6W	
R220	1-249-437-11	CARBON	47K	5%	1/6W	
R221	1-249-430-11	CARBON	12K	5%	1/6W	
R222	1-247-883-00	CARBON	150K	5%	1/6W	
R223	1-247-849-00	CARBON	5.6K	5%	1/6W	
R224	1-247-849-00	CARBON	5.6K	5%	1/6W	
R225	1-249-405-11	CARBON	100	5%	1/6W	
R226	1-247-849-00	CARBON	5.6K	5%	1/6W	
R227	1-247-849-00	CARBON	5.6K	5%	1/6W	
R228	1-249-405-11	CARBON	100	5%	1/6W	
R229	1-249-437-11	CARBON	47K	5%	1/6W	
R230	1-249-429-11	CARBON	10K	5%	1/6W	
R231	1-249-421-11	CARBON	2.2K	5%	1/6W	
R232	1-249-429-11	CARBON	10K	5%	1/6W	
R233	1-249-407-11	CARBON	150	5%	1/6W	
R234	1-249-405-11	CARBON	100	5%	1/6W	
R235	1-249-416-11	CARBON	820	5%	1/6W	
R236	1-249-441-11	CARBON	100K	5%	1/6W	
R237	1-249-430-11	CARBON	12K	5%	1/6W	
R238	1-249-441-11	CARBON	100K	5%	1/6W	
R239	1-249-437-11	CARBON	47K	5%	1/6W	
R240	1-249-431-11	CARBON	15K	5%	1/6W	
R241	1-249-428-11	CARBON	8.2K	5%	1/6W	
R242	1-249-416-11	CARBON	820	5%	1/6W	
R243	1-249-433-11	CARBON	22K	5%	1/6W	
R244	1-249-434-11	CARBON	27K	5%	1/6W	
R245	1-249-424-11	CARBON	3.9K	5%	1/6W	
R246	1-249-417-11	CARBON	1K	5%	1/6W	
R247	1-249-429-11	CARBON	10K	5%	1/6W	
R248	1-249-425-11	CARBON	4.7K	5%	1/6W	
R249	1-249-421-11	CARBON	2.2K	5%	1/6W	
R250	1-249-435-11	CARBON	33K	5%	1/6W	
R251	1-249-435-11	CARBON	33K	5%	1/6W	
R252	1-249-418-11	CARBON	1.2K	5%	1/6W	
R253	1-249-433-11	CARBON	22K	5%	1/6W	
R254	1-249-434-11	CARBON	27K	5%	1/6W	
R255	1-249-423-11	CARBON	3.3K	5%	1/6W	
R256	1-249-418-11	CARBON	1.2K	5%	1/6W	
R257	1-249-429-11	CARBON	10K	5%	1/6W	
R258	1-249-425-11	CARBON	4.7K	5%	1/6W	
R259	1-249-421-11	CARBON	2.2K	5%	1/6W	
R260	1-249-413-11	CARBON	470	5%	1/6W	
R261	1-249-411-11	CARBON	330	5%	1/6W	
R262	1-249-419-11	CARBON	1.5K	5%	1/6W	
R263	1-249-421-11	CARBON	2.2K	5%	1/6W	
R264	1-249-419-11	CARBON	1.5K	5%	1/6W	
R265	1-249-431-11	CARBON	15K	5%	1/6W	
R266	1-249-416-11	CARBON	820	5%	1/6W	
R267	1-249-424-11	CARBON	3.9K	5%	1/6W	
R268	1-249-416-11	CARBON	820	5%	1/6W	
R269	1-249-424-11	CARBON	3.9K	5%	1/6W	
R270	1-249-420-11	CARBON	1.8K	5%	1/6W	
R271	1-249-423-11	CARBON	3.3K	5%	1/6W	
R272	1-249-417-11	CARBON	1K	5%	1/6W	
R273	1-249-416-11	CARBON	820	5%	1/6W	
R274	1-249-412-11	CARBON	390	5%	1/6W	
R275	1-249-412-11	CARBON	390	5%	1/6W	
R276	1-249-424-11	CARBON	3.9K	5%	1/6W	
R277	1-249-416-11	CARBON	820	5%	1/6W	
R278	1-249-436-11	CARBON	39K	5%	1/6W	
R279	1-249-419-11	CARBON	1.5K	5%	1/6W	
R280	1-249-441-11	CARBON	100K	5%	1/6W	
R281	1-249-441-11	CARBON	100K	5%	1/6W	
R282	1-249-433-11	CARBON	22K	5%	1/6W	
R283	1-249-435-11	CARBON	33K	5%	1/6W	
R284	1-249-423-11	CARBON	3.3K	5%	1/6W	
R285	1-249-440-11	CARBON	82K	5%	1/6W	
R286	1-249-419-11	CARBON	1.5K	5%	1/6W	
R287	1-249-419-11	CARBON	1.5K	5%	1/6W	
R288	1-249-433-11	CARBON	22K	5%	1/6W	
R289	1-249-429-11	CARBON	10K	5%	1/6W	
R290	1-249-416-11	CARBON	820	5%	1/6W	
R291	1-249-416-11	CARBON	820	5%	1/6W	
R292	1-249-431-11	CARBON	15K	5%	1/6W	
R293	1-249-425-11	CARBON	4.7K	5%	1/6W	
R294	1-249-433-11	CARBON	22K	5%	1/6W	
R295	1-249-433-11	CARBON	22K	5%	1/6W	
R296	1-249-429-11	CARBON	10K	5%	1/6W	
R297	1-249-399-11	CARBON	33	5%	1/6W	
R298	1-249-429-11	CARBON	10K	5%	1/6W	
R299	1-247-849-00	CARBON	5.6K	5%	1/6W	

Ref.No.	Part No.	Description				Remark
R300	1-249-417-11	CARBON	1K	5%	1/6W	
R302	1-249-421-11	CARBON	2.2K	5%	1/6W	
R303	1-249-433-11	CARBON	22K	5%	1/6W	
R306	1-249-433-11	CARBON	22K	5%	1/6W	
R307	1-247-725-11	CARBON	10K	5%	1/4W	
		VARIABLE RESISTOR				
RV201	1-228-723-00	RES, ADJ, CERAMIC CARBON 4.7K				
RV202	1-228-727-00	RES, ADJ, CERAMIC CARBON 47K				
RV251	1-228-725-00	RES, ADJ, CERAMIC CARBON 22K				
		TRANSFORMER				
T201	1-409-372-00	COIL, TRAP				
T202	1-404-476-00	COIL, IF				
T203	1-404-476-00	COIL, IF				
T204	1-404-558-11	COIL				
T205	1-404-556-11	COIL				
T206	1-404-558-11	COIL				
T207	1-404-556-11	COIL				
T208	1-404-477-00	COIL, IF				
T209	1-404-660-11	COIL				
T210	1-404-493-00	COIL				
T211	1-404-477-00	COIL, IF				
		TUNER				
TU101⚠	1-463-661-21	TUNER, ET (BT-886D)				
**********						
	*A-1306-376-A	M BOARD, COMPLETE				
		**********				
		CAPACITOR				
C001	1-102-112-00	CERAMIC	330PF	10%	50V	
C002	1-123-381-00	ELECT	2.2MF	20%	50V	
C003	1-123-381-00	ELECT	2.2MF	20%	50V	
C004	1-161-013-00	CERAMIC	0.01MF	10%	25V	
C005	1-136-165-00	MYLAR	0.1MF	10%	50V	
C006	1-102-973-00	CERAMIC	100PF	5%	50V	
C007	1-123-356-00	ELECT	10MF	20%	50V	
C008	1-102-123-00	CERAMIC	0.0033MF	10%	50V	
C012	1-102-959-00	CERAMIC	22PF	5%	50V	
C013	1-102-963-00	CERAMIC	33PF	5%	50V	
C014	1-102-074-00	CERAMIC	0.001MF	10%	50V	
C015	1-123-356-00	ELECT	10MF	20%	50V	
C016	1-123-307-00	ELECT	100MF	20%	10V	
C017	1-161-772-11	CERAMIC	0.1MF	10%	25V	
C018	1-123-379-00	ELECT	0.47MF	20%	50V	
C020	1-123-379-00	ELECT	0.47MF	20%	50V	
C151	1-101-361-00	CERAMIC	150PF	5%	50V	
C152	1-123-307-00	ELECT	100MF	20%	10V	
C153	1-102-973-00	CERAMIC	100PF	5%	50V	
C154	1-102-971-00	CERAMIC	82PF	5%	50V	

Ref.No.	Part No.	Description			Remark
C155	1-102-662-00	CERAMIC	7PF	0.5PF	50V
C156	1-102-662-00	CERAMIC	7PF	0.5PF	50V
C159	1-123-318-00	ELECT	33MF	20%	16V
C166	1-102-965-00	CERAMIC	39PF	5%	50V
C167	1-102-947-00	CERAMIC	10PF	5%	50V
C168	1-123-333-00	ELECT	100MF	20%	16V
C169	1-123-318-00	ELECT	33MF	20%	16V
C170	1-124-475-11	ELECT	470MF	20%	16V
C171	1-123-318-00	ELECT	33MF	20%	16V
C501	1-102-934-00	CERAMIC	1PF	0.25PF	50V
C502	1-101-880-00	CERAMIC	47PF	5%	50V
C503	1-102-510-00	CERAMIC	12PF	5%	50V
C504	1-101-880-00	CERAMIC	47PF	5%	50V
C505	1-102-973-00	CERAMIC	100PF	5%	50V
C506	1-102-816-00	CERAMIC	120PF	5%	50V
C507	1-102-961-00	CERAMIC	27PF	5%	50V
C508	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C509	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C510	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C511	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C512	1-102-961-00	CERAMIC	27PF	5%	50V
C513	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C514	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C515	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C516	1-102-961-00	CERAMIC	27PF	5%	50V
C517	1-101-880-00	CERAMIC	47PF	5%	50V
C518	1-102-510-00	CERAMIC	12PF	5%	50V
C519	1-101-880-00	CERAMIC	47PF	5%	50V
C520	1-102-816-00	CERAMIC	120PF	5%	50V
C521	1-102-816-00	CERAMIC	120PF	5%	50V
C522	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C523	1-102-961-00	CERAMIC	27PF	5%	50V
C524	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C525	1-123-318-00	ELECT	33MF	20%	16V
C526	1-102-125-00	CERAMIC	0.0047MF	10%	50V
C527	1-123-356-00	ELECT	10MF	20%	50V
C528	1-123-369-00	ELECT	4.7MF	20%	50V
C529	1-102-121-00	CERAMIC	0.0022MF	10%	50V
C530	1-123-380-00	ELECT	1MF	20%	50V
C532	1-161-013-00	CERAMIC	0.01MF	10%	25V
C533	1-103-721-00	POLYSTYRENE	680PF	5%	50V
C534	1-102-965-00	CERAMIC	39PF	5%	50V
C535	1-102-965-00	CERAMIC	39PF	5%	50V
C536	1-161-013-00	CERAMIC	0.01MF	10%	25V
C537	1-161-013-00	CERAMIC	0.01MF	10%	25V
C538	1-106-371-00	MYLAR	0.015MF	10%	100V
C539	1-123-380-00	ELECT	1MF	20%	50V
C540	1-123-356-00	ELECT	10MF	20%	50V
C541	1-123-380-00	ELECT	1MF	20%	50V
C542	1-123-318-00	ELECT	33MF	20%	16V
C543	1-123-380-00	ELECT	1MF	20%	50V
C544	1-123-380-00	ELECT	1MF	20%	50V
C545	1-123-380-00	ELECT	1MF	20%	50V

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Ref.No.	Part No.	Description				Remark
C546	1-108-622-91	MYLAR	0.0047MF	10%	100V	
C547	1-108-622-91	MYLAR	0.0047MF	10%	100V	
C550	1-123-356-00	ELECT	10MF	20%	50V	
C551	1-123-381-00	ELECT	2.2MF	20%	50V	
C553	1-124-475-11	ELECT	470MF	20%	16V	
C560	1-123-369-00	ELECT	4.7MF	20%	50V	
C561	1-123-369-00	ELECT	4.7MF	20%	50V	
C565	1-123-369-00	ELECT	4.7MF	20%	50V	
C566	1-123-369-00	ELECT	4.7MF	20%	50V	
C567	1-123-380-00	ELECT	1MF	20%	50V	
C568	1-123-380-00	ELECT	1MF	20%	50V	
C569	1-123-379-00	ELECT	0.47MF	20%	50V	
C570	1-123-379-00	ELECT	0.47MF	20%	50V	
		FILTER				
CF151	1-404-134-00	TRAP, CERAMIC (5.5MHZ)				
CF501	1-527-260-00	FILTER, CERAMIC (4.5MHZ)				
		DIODE				
D001	8-719-911-19	DIODE 1SS119				
D002	8-719-911-19	DIODE 1SS119				
D003	8-719-911-19	DIODE 1SS119				
D004	8-719-911-19	DIODE 1SS119				
D006	8-719-911-19	DIODE 1SS119				
D007	8-719-911-19	DIODE 1SS119				
D008	8-719-911-19	DIODE 1SS119				
D009	8-719-911-19	DIODE 1SS119				
D010	8-719-911-19	DIODE 1SS119				
D011	8-719-911-19	DIODE 1SS119				
D012	8-719-911-19	DIODE 1SS119				
D013	8-719-911-19	DIODE 1SS119				
D016	8-719-911-19	DIODE 1SS119				
D017	8-719-911-19	DIODE 1SS119				
D018	8-719-911-19	DIODE 1SS119				
D151	8-719-100-57	DIODE RD10E-B2				
D156	8-719-000-12	DIODE MC931				
D157	8-719-000-12	DIODE MC931				
D158	8-719-000-06	DIODE MC921				
D159	8-719-911-19	DIODE 1SS119				
D160	8-719-911-19	DIODE 1SS119				
D501	8-719-903-27	DIODE 1SS168				
D502	8-719-903-27	DIODE 1SS168				
D503	8-719-903-27	DIODE 1SS168				
D504	8-719-903-27	DIODE 1SS168				
D505	8-719-911-19	DIODE 1SS119				
D506	8-719-911-19	DIODE 1SS119				
D516	8-719-000-06	DIODE MC921				
D518	8-719-000-04	DIODE MC911				
D520	8-719-000-06	DIODE MC921				
D521	8-719-000-06	DIODE MC921				
D522	8-719-000-06	DIODE MC921				

Ref.No.	Part No.	Description	Remark
		IC	
IC001	8-759-603-67	IC CX523-117P	
IC002	8-759-600-92	IC M58657P	
IC005	8-759-157-40	IC UPC574J	
IC501	8-759-911-15	IC TDA4445F	
IC502	8-759-003-90	IC TBA129	
IC503	8-759-007-55	IC TDA4944	
		JACK	
J501	1-526-575-00	SOCKET, PLUG	
		COIL	
L151	1-408-603-00	MICRO INDUCTOR 10UH	
L152	1-408-408-00	MICRO INDUCTOR 8.2UH	
L153	1-408-417-00	MICRO INDUCTOR 47UH	
L154	1-408-413-00	MICRO INDUCTOR 22UH	
L155	1-407-711-00	MICRO INDUCTOR 330UH	
L501	1-408-406-00	MICRO INDUCTOR 5.6UH	
L502	1-408-406-00	MICRO INDUCTOR 5.6UH	
L503	1-408-413-00	MICRO INDUCTOR 22UH	
		CONNECTOR	
M1	*1-560-127-00	PLUG, CONNECTOR (2.5MM) 7P	
M2	*1-560-156-00	PLUG, CONNECTOR (2.5MM PITCH)	
M3	*1-560-224-00	PLUG, CONNECTOR (2.5MM) 10P	
M4	*1-560-123-00	PLUG, CONNECTOR (2.5MM PITCH)	
M5	*1-560-290-00	PLUG, CONNECTOR (2.5MM PITCH)	
M6	*1-560-126-00	PLUG, CONNECTOR (2.5MM) 6P	
M7	*1-560-224-00	PLUG, CONNECTOR(2.5MM PITCH)10P	
M8	*1-560-123-00	PLUG, CONNECTOR (2.5MM) 3P	
M10	*1-560-290-00	PLUG, CONNECTOR (2.5MM PITCH)	
M12	*1-560-156-00	PLUG, CONNECTOR (2.5MM PITCH)	
M13	*1-560-127-00	PLUG, CONNECTOR (2.5MM PITCH)	
		TRANSISTOR	
Q002	8-729-178-54	TRANSISTOR 2SC2785	
Q003	8-729-900-74	TRANSISTOR DTC143TS	
Q004	8-729-178-54	TRANSISTOR 2SC2785	
Q005	8-729-603-50	TRANSISTOR 2SC403SP	
Q006	8-729-117-54	TRANSISTOR 2SA1175	
Q007	8-729-178-54	TRANSISTOR 2SC2785	
Q010	8-729-178-54	TRANSISTOR 2SC2785	
Q011	8-729-117-54	TRANSISTOR 2SA1175	
Q012	8-729-178-54	TRANSISTOR 2SC2785	
Q013	8-729-900-65	TRANSISTOR DTA144ES	
Q014	8-729-900-89	TRANSISTOR DTC144ES	
Q151	8-729-178-54	TRANSISTOR 2SC2785	
Q152	8-729-178-54	TRANSISTOR 2SC2785	
Q153	8-729-178-54	TRANSISTOR 2SC2785	
Q154	8-729-117-54	TRANSISTOR 2SA1175	
Q155	8-729-117-54	TRANSISTOR 2SA1175	

Ref.No.	Part No.	Description	Remark
Q156	8-729-900-89	TRANSISTOR DTC144ES	
Q157	8-729-900-36	TRANSISTOR DTC124ES	
Q158	8-729-178-54	TRANSISTOR 2SC2785	
Q163	8-729-178-54	TRANSISTOR 2SC2785	
Q164	8-729-178-54	TRANSISTOR 2SC2785	
Q165	8-729-178-54	TRANSISTOR 2SC2785	
Q166	8-729-117-54	TRANSISTOR 2SA1175	
Q167	8-729-117-54	TRANSISTOR 2SA1175	
Q169	8-729-178-54	TRANSISTOR 2SC2785	
Q170	8-729-900-89	TRANSISTOR DTC144ES	
Q171	8-729-900-89	TRANSISTOR DTC144ES	
Q501	8-729-901-59	TRANSISTOR BF199	
Q503	8-729-178-54	TRANSISTOR 2SC2785	
Q504	8-729-178-54	TRANSISTOR 2SC2785	
Q505	8-729-178-54	TRANSISTOR 2SC2785	
Q506	8-729-117-54	TRANSISTOR 2SA1175	
Q507	8-729-117-54	TRANSISTOR 2SA1175	
Q510	8-729-117-54	TRANSISTOR 2SA1175	
Q511	8-729-178-54	TRANSISTOR 2SC2785	
Q512	8-729-178-54	TRANSISTOR 2SC2785	

RESISTOR

R001	1-249-417-11	CARBON	1K	5%	1/6W	
R002	1-249-417-11	CARBON	1K	5%	1/6W	
R003	1-249-417-11	CARBON	1K	5%	1/6W	
R005	1-249-429-11	CARBON	10K	5%	1/6W	
R006	1-249-437-11	CARBON	47K	5%	1/6W	
R007	1-249-417-11	CARBON	1K	5%	1/6W	
R008	1-249-422-11	CARBON	2.7K	5%	1/6W	
R009	1-249-409-11	CARBON	220	5%	1/6W	
R010	1-249-409-11	CARBON	220	5%	1/6W	
R011	1-249-409-11	CARBON	220	5%	1/6W	
R012	1-249-409-11	CARBON	220	5%	1/6W	
R013	1-249-409-11	CARBON	220	5%	1/6W	
R014	1-249-409-11	CARBON	220	5%	1/6W	
R015	1-249-409-11	CARBON	220	5%	1/6W	
R016	1-249-409-11	CARBON	220	5%	1/6W	
R017	1-249-401-11	CARBON	47	5%	1/6W	
R019	1-249-425-11	CARBON	4.7K	5%	1/6W	
R020	1-249-425-11	CARBON	4.7K	5%	1/6W	
R021	1-249-431-11	CARBON	15K	5%	1/6W	
R022	1-249-425-11	CARBON	4.7K	5%	1/6W	
R023	1-249-431-11	CARBON	15K	5%	1/6W	
R024	1-249-405-11	CARBON	100	5%	1/6W	
R025	1-249-431-11	CARBON	15K	5%	1/6W	
R026	1-249-433-11	CARBON	22K	5%	1/6W	
R027	1-249-435-11	CARBON	33K	5%	1/6W	
R028	1-249-433-11	CARBON	22K	5%	1/6W	
R029	1-249-433-11	CARBON	22K	5%	1/6W	
R030	1-249-433-11	CARBON	22K	5%	1/6W	
R031	1-249-433-11	CARBON	22K	5%	1/6W	
R033	1-247-716-11	CARBON	1.8K	5%	1/4W	F
R034	1-249-413-11	CARBON	470	5%	1/6W	
R035	1-249-413-11	CARBON	470	5%	1/6W	
R036	1-249-413-11	CARBON	470	5%	1/6W	
R037	1-249-417-11	CARBON	1K	5%	1/6W	
R038	1-249-433-11	CARBON	22K	5%	1/6W	
R039	1-249-416-11	CARBON	820	5%	1/6W	
R040	1-249-423-11	CARBON	3.3K	5%	1/6W	
R041	1-249-429-11	CARBON	10K	5%	1/6W	
R042	1-249-433-11	CARBON	22K	5%	1/6W	
R051	1-249-417-11	CARBON	1K	5%	1/6W	
R054	1-249-425-11	CARBON	4.7K	5%	1/6W	
R055	1-249-421-11	CARBON	2.2K	5%	1/6W	
R059	1-249-421-11	CARBON	2.2K	5%	1/6W	
R060	1-249-421-11	CARBON	2.2K	5%	1/6W	
R064	1-249-437-11	CARBON	47K	5%	1/6W	
R065	1-249-433-11	CARBON	22K	5%	1/6W	
R066	1-249-437-11	CARBON	47K	5%	1/6W	
R067	1-249-437-11	CARBON	47K	5%	1/6W	
R068	1-247-891-00	CARBON	330K	5%	1/6W	
R069	1-249-437-11	CARBON	47K	5%	1/6W	
R151	1-249-418-11	CARBON	1.2K	5%	1/6W	
R152	1-249-418-11	CARBON	1.2K	5%	1/6W	
R153	1-249-421-11	CARBON	2.2K	5%	1/6W	
R154	1-249-431-11	CARBON	15K	5%	1/6W	
R155	1-249-429-11	CARBON	10K	5%	1/6W	
R156	1-249-417-11	CARBON	1K	5%	1/6W	
R157	1-249-413-11	CARBON	470	5%	1/6W	
R158	1-249-413-11	CARBON	470	5%	1/6W	
R159	1-249-417-11	CARBON	1K	5%	1/6W	
R160	1-249-413-11	CARBON	470	5%	1/6W	
R161	1-249-413-11	CARBON	470	5%	1/6W	
R162	1-249-414-11	CARBON	560	5%	1/6W	
R163	1-249-417-11	CARBON	1K	5%	1/6W	
R164	1-249-429-11	CARBON	10K	5%	1/6W	
R165	1-249-417-11	CARBON	1K	5%	1/6W	
R166	1-249-412-11	CARBON	390	5%	1/6W	
R167	1-249-410-11	CARBON	270	5%	1/6W	
R168	1-249-417-11	CARBON	1K	5%	1/6W	
R169	1-249-428-11	CARBON	8.2K	5%	1/6W	
R170	1-249-429-11	CARBON	10K	5%	1/6W	
R179	1-249-418-11	CARBON	1.2K	5%	1/6W	
R180	1-249-420-11	CARBON	1.8K	5%	1/6W	
R181	1-249-415-11	CARBON	680	5%	1/6W	
R182	1-249-414-11	CARBON	560	5%	1/6W	
R183	1-249-419-11	CARBON	1.5K	5%	1/6W	
R184	1-249-389-11	CARBON	4.7	5%	1/6W	F
R185	1-249-389-11	CARBON	4.7	5%	1/6W	F
R186	1-249-417-11	CARBON	1K	5%	1/6W	
R189	1-249-437-11	CARBON	47K	5%	1/6W	
R190	1-247-838-00	CARBON	2K	5%	1/6W	
R191	1-249-429-11	CARBON	10K	5%	1/6W	
R192	1-249-429-11	CARBON	10K	5%	1/6W	
R501	1-249-428-11	CARBON	8.2K	5%	1/6W	
R502	1-249-428-11	CARBON	8.2K	5%	1/6W	

Ref.No.	Part No.	Description				Remark
R503	1-249-428-11	CARBON	8.2K	5%	1/6W	
R504	1-249-428-11	CARBON	8.2K	5%	1/6W	
R505	1-249-424-11	CARBON	3.9K	5%	1/6W	
R506	1-249-419-11	CARBON	1.5K	5%	1/6W	
R507	1-249-412-11	CARBON	390	5%	1/6W	
R508	1-249-417-11	CARBON	1K	5%	1/6W	
R509	1-249-428-11	CARBON	8.2K	5%	1/6W	
R510	1-249-417-11	CARBON	1K	5%	1/6W	
R511	1-249-428-11	CARBON	8.2K	5%	1/6W	
R512	1-249-417-11	CARBON	1K	5%	1/6W	
R513	1-249-415-11	CARBON	680	5%	1/6W	
R514	1-249-427-11	CARBON	6.8K	5%	1/6W	
R515	1-249-420-11	CARBON	1.8K	5%	1/6W	
R516	1-249-416-11	CARBON	820	5%	1/6W	
R517	1-249-416-11	CARBON	820	5%	1/6W	
R518	1-249-431-11	CARBON	15K	5%	1/6W	
R519	1-249-425-11	CARBON	4.7K	5%	1/6W	
R520	1-249-438-11	CARBON	56K	5%	1/6W	
R521	1-249-440-11	CARBON	82K	5%	1/6W	
R522	1-249-413-11	CARBON	470	5%	1/6W	
R523	1-249-423-11	CARBON	3.3K	5%	1/6W	
R524	1-247-883-00	CARBON	150K	5%	1/6W	
R525	1-249-433-11	CARBON	22K	5%	1/6W	
R526	1-249-431-11	CARBON	15K	5%	1/6W	
R527	1-249-419-11	CARBON	1.5K	5%	1/6W	
R528	1-249-419-11	CARBON	1.5K	5%	1/6W	
R529	1-249-422-11	CARBON	2.7K	5%	1/6W	
R530	1-249-429-11	CARBON	10K	5%	1/6W	
R531	1-249-429-11	CARBON	10K	5%	1/6W	
R532	1-249-421-11	CARBON	2.2K	5%	1/6W	
R533	1-249-421-11	CARBON	2.2K	5%	1/6W	
R534	1-249-433-11	CARBON	22K	5%	1/6W	
R535	1-249-429-11	CARBON	10K	5%	1/6W	
R536	1-249-433-11	CARBON	22K	5%	1/6W	
R537	1-249-436-11	CARBON	39K	5%	1/6W	
R551	1-249-429-11	CARBON	10K	5%	1/6W	
R552	1-249-429-11	CARBON	10K	5%	1/6W	
R560	1-249-405-11	CARBON	100	5%	1/6W	
R561	1-249-405-11	CARBON	100	5%	1/6W	
R562	1-249-429-11	CARBON	10K	5%	1/6W	
R563	1-249-433-11	CARBON	22K	5%	1/6W	
R564	1-249-425-11	CARBON	4.7K	5%	1/6W	
R565	1-249-437-11	CARBON	47K	5%	1/6W	
R566	1-249-437-11	CARBON	47K	5%	1/6W	
R567	1-247-887-00	CARBON	220K	5%	1/6W	
R568	1-247-887-00	CARBON	220K	5%	1/6W	
R569	1-249-431-11	CARBON	15K	5%	1/6W	
R570	1-247-895-00	CARBON	470K	5%	1/6W	
R571	1-247-895-00	CARBON	470K	5%	1/6W	
R582	1-249-413-11	CARBON	470	5%	1/6W	
R583	1-249-413-11	CARBON	470	5%	1/6W	

Ref.No.	Part No.	Description				Remark
		VARIABLE RESISTOR				
RV151	1-230-106-00	RES, ADJ, CARBON 10K				
		TRANSFORMER				
T151	1-404-495-00	COIL				
T501	1-404-557-11	COIL				
T502	1-404-557-11	COIL				
T503	1-404-557-11	COIL				
T504	1-404-557-11	COIL				
T505	1-404-477-00	COIL, IF				
		CRYSTAL				
X001	1-527-790-00	OSCILLATOR, CERAMIC				
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*1-617-680-11		H2 BOARD				
		********				
		SWITCH				
S461	1-553-766-00	SWITCH, KEY BOARD				
S462	1-553-766-00	SWITCH, KEY BOARD				
**********						
*1-617-679-11		H1 BOARD				
		********				
		CAPACITOR				
C451	1-123-369-00	ELECT	4.7MF	20%	50V	
C452	1-102-973-00	CERAMIC	100PF	10%	50V	
C453	1-123-318-00	ELECT	33MF	20%	16V	
C454	1-123-333-00	ELECT	100MF	20%	16V	
C455	1-123-356-00	ELECT	10MF	20%	16V	
C456	1-161-055-00	CERAMIC	0.022MF	10%	25V	
C457	1-123-369-00	ELECT	4.7MF	20%	50V	
C458	1-123-321-00	ELECT	220MF	20%	16V	
C459	1-102-973-00	CERAMIC	100PF	10%	50V	
C460	1-123-333-00	ELECT	100MF	20%	16V	
C461	1-123-356-00	ELECT	10MF	20%	16V	
C462	1-161-055-00	CERAMIC	0.022MF	10%	25V	
		IC				
IC451	8-759-841-75	IC LA4175				
		COIL				
L451	1-408-163-00	MICRO INDUCTOR 5.6MMH				
		RESISTOR				
R451	1-249-416-11	CARBON	820	5%	1/6W	
R452	1-249-429-11	CARBON	10K	5%	1/6W	
R453	1-249-400-11	CARBON	39	5%	1/6W	

H1 HL K Z

Ref.No.	Part No.	Description				Remark
R454	1-249-417-11	CARBON	1K	5%	1/6W	
R455	1-249-429-11	CARBON	10K	5%	1/6W	
R456	1-249-416-11	CARBON	820	5%	1/6W	
R457	1-249-400-11	CARBON	39	5%	1/6W	
R458	1-249-417-11	CARBON	1K	5%	1/6W	
R459	1-249-413-11	CARBON	470	5%	1/6W	
R460	1-249-413-11	CARBON	470	5%	1/6W	
		VARIABLE RESISTOR				
RV451	1-228-366-21	RES, VAR, CARBON 20K/20K				
		SWITCH				
S452	1-553-329-00	SWITCH, PUSH (MONO KEY)				
S453	1-553-329-00	SWITCH, PUSH (MONO KEY)				
S454	1-553-766-00	SWITCH, KEY BOARD				
S455	1-553-766-00	SWITCH, KEY BOARD				
S456	1-553-766-00	SWITCH, KEY BOARD				
S457	1-553-766-00	SWITCH, KEY BOARD				
S458	1-553-766-00	SWITCH, KEY BOARD				
S459	1-553-766-00	SWITCH, KEY BOARD				
S460	1-553-766-00	SWITCH, KEY BOARD				
S463	1-553-206-00	SWITCH, SLIDE				
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	*1-617-681-11	HL BOARD ********				
		DIODE				
D404	8-719-311-23	DIODE SEL1122P-N				
	*4-345-836-00	HOLDER (S-2), LED; D404				
D405	8-719-311-23	DIODE SEL1122P-N				
	*4-345-836-00	HOLDER (S-2), LED; D405				
D406	8-719-102-32	DIODE SG232D-Q				
	*4-345-836-00	HOLDER (S-2), LED; D406				
D407	8-719-114-34	DIODE SY432D				
	*4-345-836-00	HOLDER (S-2), LED; D407				
D408	8-719-311-23	DIODE SEL1122P-N				
	*4-345-836-00	HOLDER (S-2), LED; D408				
D409	8-719-311-23	DIODE SEL11122P-N				
	*4-345-836-00	HOLDER (S-2), LED; D409				
D410	8-719-908-08	DIODE SL-1274				
	*1-526-638-00	SOCKET, IC (9P); D410				
D411	8-719-102-32	DIODE SG232D-Q				
	*4-345-836-00	HOLDER (S-2), LED; D411				
		RESISTOR				
R401	1-249-421-11	CARBON	2.2K	5%	1/6W	
R402	1-249-408-11	CARBON	180	5%	1/6W	

Ref.No.	Part No.	Description				Remark
	*1-607-156-00	K BOARD *******				
		TERMINAL BOARD				
KP702	1-537-079-11	TERMINAL BOARD, INPUT/OUTPUT				
		RESISTOR				
R724	1-249-403-11	CARBON	68	5%	1/6W	
R725	1-249-403-11	CARBON	68	5%	1/6W	
R726	1-247-831-31	CARBON	1K	5%	1/6W	
R727	1-247-823-00	CARBON	470	5%	1/6W	
R728	1-247-823-00	CARBON	470	5%	1/6W	
R729	1-247-887-00	CARBON	220K	5%	1/6W	
R730	1-247-887-00	CARBON	220K	5%	1/6W	
R731	1-247-823-00	CARBON	470	5%	1/6W	
R732	1-247-823-00	CARBON	470	5%	1/6W	
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	*1-617-682-11	Z BOARD *******				
		CAPACITOR				
C481	1-161-013-00	CERAMIC	0.01MF	10%	25V	
C482	1-161-013-00	CERAMIC	0.01MF	10%	25V	
		JACK				
J501	1-507-657-00	JACK (LARGE TYPE)				
		CONNECTOR				
Z1	*1-560-278-00	PLUG, CONNECTOR 3P				
**********						
		MISCELLANEOUS **********				
	⚠1-526-854-11	SOCKET, ANTENNA (WITH PLUG)				
	⚠1-551-270-11	CORD, POWER				
	⚠1-551-732-21	CORD, POWER (FOR AS)				
	*1-555-110-00	CABLE, PIN				
S901	⚠1-570-052-12	SWITCH, PUSH (AC POWER)(1 KEY)				

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

ACCESSORIES AND PACKING MATERIALS
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Part No.	Description	Remark
A-1470-802-A	COMMANDER ASSY (RM-669)	
1-506-409-00	ADAPTOR, CONVERSION	
1-551-475-31	CABLE ASSY	
1-551-734-11	CORD, CONNECTION (RK-74A)	
1-551-841-00	CORD, CONNECTION (RK-69A)	
*4-309-407-00	BAG, POLYETHYLENE	
*4-357-830-00	CUSHION (SIDE)	
*4-357-831-00	CUSHION (UPPER)	
*4-379-523-01	INDIVIDUAL CARTON	
4-482-429-41	MANUAL, INSTRUCTION	